REPORT RESUMES

ED 003 359 24

EFFECTS OF AN INTENSIVE INSERVICE PROGRAM ON TEACHER'S
CLASSROOM BEHAVIOR AND PUPIL READING ACHIEVEMENT.
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REPORT NUMBER CRP-2709 PUB DATE NOV 65
REPORT NUMBER BR-5-0471
EDRS PRICE MF-$0.18 HC-$3.76 94P.

DESCRIPTORS- TEACHER SEMINARS, *GRADE 1, *READING INSTRUCTION, READING ACHIEVEMENT, READING DEVELOPMENT, *TEACHER EXPERIENCES, *TEACHER IMPROVEMENT, BEGINNING READING, *INSERVICE TEACHER EDUCATION, METROPOLITAN READING READINESS TEST, PINTNER CUNNINGHAM PRIMARY ABILITIES TEST, UNIVERSITY PARK, PENNSYLVANIA, STANFORD ACHIEVEMENT TEST

AN INVESTIGATION WAS MADE TO GAUGE THE EFFECTS OF AN INTENSIVE, INSERVICE TRAINING PROGRAM ON TEACHERS' CLASSROOM BEHAVIOR AND READING ACHIEVEMENT OF PUPILS TAUGHT BY PARTICIPATING TEACHERS. A TOTAL OF 30 FIRST-GRADE TEACHERS VOLUNTEERED FOR PARTICIPATION. ONE-HALF OF THIS TOTAL WAS ASSIGNED TO AN EXPERIMENTAL GROUP, AND THE OTHER HALF TO A CONTROL GROUP. TEACHERS IN THE EXPERIMENTAL GROUP ATTENDED A 2-WEEK PRESCHOOL SEMINAR AND PARTICIPATED IN 25 2-HOUR SEMINAR SESSIONS HELD DURING THE FIRST 30 WEEKS OF THE SCHOOL YEAR. CONTENT OF THE SEMINARS FOCUSED ON AN ANALYSIS OF READING RESEARCH RELATED TO FIRST-GRADE READING INSTRUCTION AND SELECTED "NEWER TRENDS" IN BEGINNING READING. ALL PUPILS FOR BOTH INSTRUCTOR GROUPS WERE GIVEN THE "METROPOLITAN READING READINESS TEST" AND THE "PINTNER-CUNNINGHAM PRIMARY ABILITIES TEST" AS PRETESTS. AFTER 140 DAYS OF INSTRUCTION, PUPILS WERE ADMINISTERED THE 5 READING SUBTESTS OF THE STANFORD ACHIEVEMENT TEST. ANALYSIS OF VARIANCE REVEALED NO SIGNIFICANT DIFFERENCES IN READING ACHIEVEMENT BETWEEN PUPILS OF TEACHERS IN THE CONTROL GROUP AND THOSE IN THE EXPERIMENTAL GROUP. MEAN DIFFERENCES FAVORED THE EXPERIMENTAL GROUP. THE EXPERIENCES PROVIDED IN THE PROGRAM WERE CONDUCIVE TO HELPING TEACHERS USE NEW TECHNIQUES AND REALIZE THE IMPORTANCE OF CONTINUED PROFESSIONAL GROWTH. (JC)

5-0471

ED003359

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"Effects of an Intensive In-Service Program on Teacher's Classroom Behavior and Pupil's Reading Achievement"

Cooperative Research Project No. 2709

Arthur W. Heilman

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This project was supported by the Cooperative
Research Program of the Office of Education,
U.S. Department of Health, Education, and Welfare

The Pennsylvania State University
University Park, Pa. November 1965

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Acknowledgements

This study was made possible by the cooperation of many educators. Appreciation is extended to the school administration and first grade teachers of the Williamsport, Pennsylvania public schools. Particular thanks is due to Dr. Clyde Wuester, Superintendent of Schools, Dr. Samuel Long, Assistant Superintendent, and Mrs. Mariam Stockett, Reading Supervisor, and to the principals of each elementary school in the district who generously made their school facilities available throughout the course of the project.

To the following first grade teachers of Williamsport, whose cooperation made this project possible, we are most grateful:

Miss Gail Allen
Mrs. Blanche Askey
Mrs. Iola Ball
Mrs. Jeanette Bardo
Mrs. Joanne Bennett
Mrs. Vonture Bielefield
Mrs. Ruth Ely
Miss Marion Frey
Mrs. Ellen Gardner
Mrs. Helen Goodell
Miss Jean Harer
Mrs. Margie Hartman
Mrs. Adele Hoffman
Miss Louise Irwin
Mrs. Mary Kirby
Mrs. J. Kay Klees
Mrs. Betty Kramm
Miss Mary McCarty
Mrs. Louise Metzger
Mrs. Sara B. Poust
Mrs. Judith Ryder
Mrs. Besie Shaffer
Mrs. Glennis Simmons
Mrs. Jane Strous
Mrs. Emma Strunk
Mrs. Wanda Swift
Mrs. Eleanor Vannucci
Mrs. Gertrude Wainger
Miss Ann Weber
Mrs. Jean Wolfe

We are indebted to colleagues who participated in the instructional phase of the study, particularly Mr. Chalmers Means, Professors Madison Brewer, Myron Coulter and James Kerfoot; and to statistical advisors Harold Mitzel, Edward Sequin and Robert Brown.

Thanks is due to Mrs. Brenda Kolker who served capably as a research assistant and to Mrs. Carol Doerr, and Mrs. Helen Harpster, for secretarial assistance on the project. Finally, we acknowledge with gratitude the financial support extended by the Cooperative Research Program of the U.S. Department of Health, Education and Welfare under the Office of Education Contract OE-5-10-056, Project No. 2709.

1. Statement of The Problem

A major source of waste in American education is the failure thus far to devise an effective framework in which elementary teachers, at the local level, can meet together as professionals and share ideas and effective teaching procedures. Because of the nature of the learning tasks involved, reading instruction has suffered more from this institutional failure and resultant professional isolation than have other instructional areas.

A second source of waste is found in the meager training which potential teachers of reading receive in existing teacher training programs. (Austin, Mary, et.al., The Torch Lighters, 'Tomorrow's Teachers of Reading," Harvard University Graduate School of Education, The Riverside Press, 1961). This totally inadequate preparation for an extremely difficult and complicated teaching role has created an obvious need for effective in-service training programs. The common format of in-service training programs has proven to be totally inadequate to meet the need of teachers and school systems. Short term reading conferences and highly standardized "field courses in reading" have had little impact on the serious problem of reading instruction in American schools.

Related to this problem is the fact that the teaching of reading, (here we are concerned with grade one), is little effected by the hundreds of examples of fragmented research presently available on teaching beginning reading. There has been in the past and there is at the present a notable lack of synthesizing, translating and implementing available knowledge from research into classroom practices and procedures. The training of elementary teachers, in the majority of cases, has not conditioned them to read research reports or prepared them to analyze research if it should be read. On this facet of professional growth, teachers need guidance and help.

The teaching of reading in grade one is in essence an attempt to see that pupils experience success in a series of short term goals, all of which impinge on the long term goal of producing critical readers. Teaching is a highly complex activity and improvement of teaching reading calls for insights into present strengths and weaknesses and knowledge of alternative ways of approaching and achieving specific goals.

Once the newness of beginning teaching has worn off, the mere experience of teaching per se appears to have no salutary effect on teaching effectiveness. "It appears that a teacher's rated effectiveness at first increases rather rapidly with experience and then levels off -- the teacher may show little change in rated performance for the next 20 to 30 years." (Fattu, "Research on Teacher Evaluation", The National Elementary Principal, XLIII, November, 1963, p. 21).

This phenomenon probably indicates that the teacher has settled into a pattern of performing routine tasks in a more or less pre-determined way. Thus, teaching makes no real headway toward becoming a profession and has little to distinguish it from other types of skilled labor except that teaching is somewhat dignified by an annual contract.

The lack of concern for teacher training and professional growth through local school in-service activities has been accompanied by a heavy emphasis on research which compares various methods and different "instructional materials." The hundreds of studies which compare the efficacy of methods-materials have not resulted in any clear instructional mandate. Perhaps the inconclusive nature of research findings results from the fact that what the teacher does in the classroom has more impact on pupil growth in reading than does the prescribing or proscribing of instructional materials.

It is interesting to note that publishers of materials recognize this fact. In many instances where a set of materials is to be used in an experimental program, the publisher offers to send representatives to provide guidance to teachers.

2. Objectives

This study aims at overcoming the two major deficiencies noted above: (1) teacher's lack of knowledge of significant research relating to beginning reading with the result that teacher behavior is not materially changed by reported research and (2) the school's failure to provide a structure in which first grade teachers work cooperatively, share ideas, practices and teaching materials.

To achieve these ends a series of in-service experiences were planned which differ in major respects from the usual in-service format. First, the study would be longitudinal in nature extending over a full academic year. (It was hoped that continued financial support would provide for a second year followup). Second, the program would not be a "course of study" transferred from a university campus to the community. No academic credit or salary scale points were involved. Third, reading teachers for the first time would receive federal support for their efforts to achieve professional growth and up grading of skills. This support closely paralleled that already afforded to science, mathematics and language teachers. (At this particular time there were no programs for reading teachers. However, in the summer of 1965 the U.S. Office of Education inaugurated institutes for reading teachers).

The study was designed to provide two major types of learning-experiences as follows:

A. A two-week seminar prior to the opening of the school year 1964-65 which dealt with selected research in reading, which was considered to be pertinent to first grade teaching. The purpose of this experience was to have teachers see the implications of research for their own teaching and to help them arrive at perceptions and premises which impinge on classroom practice.

B. Teachers attended twenty-five two-hour seminar sessions during the first 30 weeks of school, the purpose of which was to provide a framework in which first grade teachers:

1. worked together in identifying, discussing and evolving tentative solutions to common problems of teaching in grade one.
2. demonstrated their own successful teaching techniques to the group.
3. prepared teaching materials which were made available to each participating teacher. (Individual teachers were free to use or modify any and all procedures.)
4. observed each other in actual classroom situations for a number of half days.
5. read and discussed professional materials in the area of reading.
6. worked cooperatively on the problem of achieving "continuous diagnosis" of each pupil in their respective classrooms.

An assumption underlying the study is that the above listed procedures would result in a break with the traditional in-service approaches presently in vogue for achieving and maintaining professional competence in teaching reading in grade one. The objective of this study is to determine if teacher's classroom behavior can be modified as a result of the experiences outlined above and what impact these teacher experiences might have on pupil achievement in reading.

3. Procedure

The study was conducted in Williamsport, Pennsylvania, a community of 42,000 population located in the north central part of Pennsylvania. The community is a manufacturing center which houses some ninety-four separate industries including Lycoming Division of Avco Corporation which employs over one thousand individuals. Bethelem Steel and Weldon manufacturing (clothing) each have in excess of 500 employees. Grit Publishing, Keeler Co., and Kellog Co. (both steel processing), Reed Co. (paper), Stroehmann Brothers Co. (bakery), Sylvania Electric Products, Timtex (textiles) each employ upwards of 250 individuals.

The community supports fifteen elementary schools which house 33 first grades.

Subjects: Thirty first grade teachers of the Williamsport public school system volunteered to participate in the study. By a random process these teachers were divided into two groups equated as closely as possible on the variables: 1) socio-economic area from which pupils are drawn, and 2) previous experience in teaching grade one. One of the selected groups served as the experimental group, the other as a control group. Each teacher in the experimental group participated in the project outlined below.

The Two Week Pre-School Seminar: The seminar was held in facilities provided by the cooperating school system during the two weeks prior to the opening of school, fall 1964. Daily sessions were scheduled Monday through Friday from 9:00 a.m. until 4:00 p.m. including an hour break for lunch.

The content of the seminar focused on analysis of reading research which related specifically to first grade reading instruction, and selected newer trends in beginning reading. Major topics discussed and activities pursued include:

1. Discussion of research on reading readiness.
2. Study of data showing relationship between children's knowledge of,

or ability to learn letter-names and letter sounds with success in first grade reading.

3. Discussion of children's language development.
4. The study and discussion of data related to sex differences in learning beginning reading.
5. The importance of on-going diagnosis as a basis for differentiation of instruction in grade one.
6. Discussion of newer approaches to teaching reading.
7. Reading professional materials.
8. The potential gains which might accrue from teacher's sharing of ideas and teaching techniques.

The two week pre-school seminar must be considered one of the more important facets of the study. Its relative success or failure, as judged by the participating teachers, would set the tone for the entire project. Briefly, the goals of the seminar were:

1. To review research and procedures which had particular relevance to first grade instruction.
2. To provide motivation for extensive reading of professional materials in the area of reading.
3. To demonstrate that teachers can profit from sharing ideas and teaching techniques.

In describing the activities which made up the two week seminar one faces the problem of how much detail to present in a report such as this. The following discussion attempts to identify the major concepts explored and teacher participating in various activities. In general, the discussion will follow the content outlined above.

A. The discussion of significant research on reading readiness included demonstrations of techniques for determining reading readiness. Since all participating teachers regularly administered a reading readiness test, discussion centered on what the tests attempt to measure and the type of test items found on such tests. Specific items from various tests were analyzed from the standpoint of "what does this item attempt to measure?"

Another point discussed was the value of studying pupil drawings. It was pointed out that some research indicates that pupil drawings of a House - Tree - Person form an excellent basis for predicting success in beginning reading. The teachers agreed that early in the school year they would secure such drawings from each pupil. Further, they would attempt to predict each pupil's relative success in reading based on the teacher's evaluation of pupil drawings of a person.

The importance of the child's social-emotional maturity in relation to success in beginning reading was discussed. Copies of a Personal Adjustment Inventory were made available and all teachers took an inventory sheet for each pupil.

B. Data on the relationship between children's knowledge of, or ability to learn letter names and letter sounds and success in beginning reading were reviewed. In general, the teachers were not conversant with this research. Copies of "Success In First Grade Reading" (Journal of Education, Durrell, et. al., 1958), were made available. At a subsequent session several members of the group presented reports on material from this volume. In addition, all teachers were invited to read from the original source.

Some of the procedures in the Boston University, and other studies were discussed. The order of instruction, particularly the stress on letter recognition early in the instructional program, was at variance with procedures followed by teachers in this group. No effort was made to have the teachers change methodology but rather to think in terms of the implications of the data studied.

Discussion revealed considerable interest on the part of some teachers to modify present practices. At this point, discussion turned to materials and teaching approaches which might be employed to further children's learning of letter names and letter sounds. Several teachers volunteered to bring concrete materials to class and explain and demonstrate their use. Sharing of ideas came about naturally and posed no problem throughout the duration of the study.

C. Data relative to sex differences in learning beginning reading were discussed, and the point was made that there is little difference of opinion among educators that boys as a group experience more difficulty in learning to read than do girls as a group, in American schools. "The more one delves into the literature on reading (and non-reading), the harder it becomes to believe that there are no differences between the sexes in mastering the beginning stages of reading." (Heilman, 1961, p. 348).

Data on this issue were presented to the group beginning with Ayres (1909) finding that approximately 13 per cent more boys than girls repeated one or more of the elementary grades. St. John (1932) reporting data for one thousand subjects, stated, "girls very distinctly excell boys in reading at grade levels one through four." Stroud and Linquist (1942) in reporting data for 50,000 pupils in three hundred or more schools found girls to be significantly superior to boys in reading comprehension, vocabulary, and basic language skills. Other data were cited including Prescott (1955), Fabian (1955), and Blanchard (1936).

A review of Preston's study (1962) which dealt with pupils in Germany as subjects and which reported opposite findings to those cited above led the group into a discussion of possible causes for the reported sex differences in reading among American pupils.

Group discussion plus concepts gleaned from various materials on reading resulted in the identification of these hypotheses: boys mature more slowly than do girls and numerous maturational factors are related to reading; school environment is closer to girls' previous experiences; materials used in beginning reading might be less interesting to boys than to girls; primary teachers are women and there is evidence of a halo effect favoring girls; boys at age 6-8 years may be less motivated to read than are girls.

Teachers were invited to consider if there were any classroom practices they might modify in order to attempt to redress the imbalance of failures among boys in grade one. This facet will be discussed in relation to the weekly seminars which continued throughout the school year.

D. Discussion of newer approaches to teaching beginning reading proved helpful. During the past few years a goodly number of approaches to teaching beginning reading have emerged; each of these have utilized a specific set of materials. Examples include: ITA, Programmed Reading, Words in Color and a number of other phonics emphasis approaches. In addition, there are certain trends which involve both administrative and classroom practice, examples of which are Individualized Reading and The Language Experience Approach. These approaches are not tied specifically to one set of prepared material.

Teachers participating in the project indicated an interest in discussing these newer approaches. The objectives of the discussion of ITA, Programmed Reading, Words in Color was simply to identify salient features of these approaches and to help teachers become familiar with the goals and materials involved. None of the teachers in the group were using or planned to use these specialized materials during the course of the study.

Individualized Reading was discussed from the standpoint that any teacher might wish to incorporate in her own teaching certain practices identified with this approach. Participants were encouraged to read a number of sources such as Jacobs, et.al. (1958), Veatch (1959), Dolch (1961), and numerous articles contained in the Reading Teacher, Elementary English and other professional journals. Salient features of this approach were identified as:

1. Self-selection of materials by pupil.
2. Teacher - Pupil conferences.
3. Recording each child's progress.
4. Necessity for wide selection of reading materials. (All first grade classrooms in the school system contained a goodly supply of trade books in addition to basal readers.)

Discussion of professional reading done by teachers centered on the above concepts and on the fact that individualized reading is not a fixed or standardized teaching method. It was noted that different teachers may use different classroom techniques and that no particular virtue resides in rigid prescribing or proscribing materials or operational procedures. The point was discussed that self-selection of reading material has little virtue prior to the time when children can read what they select. The issue of the importance of teaching skills in beginning reading was brought up for discussion by members of the group. Certain changes in teacher behavior resulted from the give and take discussion in the seminar and later weekly meetings of the group. (These will be noted in the discussion of Changes In Teacher Behavior, p. 31.)

Discussion of The Language-Experience Approach acquainted teachers with the philosophy and practices found in an integrated language arts approach.

It was found that all teachers were using experience charts in their first grade teaching. The amount of emphasis which such materials received varied considerably. Only three or four teachers had in the past, written individual stories for pupils. The remaining teachers were unaware of their colleagues using this procedure and asked for demonstrations and evaluations of the effectiveness of this practice. Next, teachers working in pairs role played teacher-pupil cooperation in writing individual pupil stories.

Participants read Learning To Read Through Experience (Lee and Allen, 1963), and selected journal articles and pertinent sections of textbooks on reading instruction. Demonstrations and further discussion took place during the two week pre-school seminar and in many of the weekly meetings that followed.

Teacher's attention was called to descriptions in the literature of how experience charts and experience stories might be used. Examples include Using Experience Charts With Children (Herrick and Nerbovig, 1964), and This Is Reading (Lindberg, 1964). A quote from the latter is included here for illustrative purposes.

> "I have something to share with you, too," the teacher says to the first graders. "I like to write books for boys and girls. Here are the ones I wrote last night. Let me read them to you."
>
> She holds up a gay booklet, "This one is called Susan's Red Shoes." Susan looks up. Can it be! She does have new red shoes. The other children look at Susan. They are very aware of her bright new sandals because she talked of nothing else yesterday.
>
> The teacher opens the cover and reads the first page:
>
> "Susan has new red shoes." She turns to the next page. "Her father bought them for her at Smith's Shoe Store. They cost $3.98." Now the children know for certain that it is their Susan, and Susan

is beaming.

The teacher continues to read. "See me stand on one foot," says Susan. "Now see me stand on the other. Now watch me jump."

"I have written the story," says the teacher to Susan, "but there are no pictures in the book. Perhaps you can make some."

The other children lean forward. What is in the other books? "Read some more. Read one about me," are the cries from the first graders. So they are read. Terry's Tooth, Jane's Trip to the Farm, Harry and His Big Brother, Roy's Birthday Cake, Cowboy Joe, Here Comes Josephine, are the titles.

"But there wasn't one about me!" is the refrain when all of the books have been read.

"See that pile of books on my desk? There isn't anything written in them. Why don't you tell me what to write -- then you will have a book, too."

During their work period, several children dictate stories. These will be read to the others the next morning.

"May I take mine home?" (Lindberg, 1964)

Reading Professional Materials: Becoming acquainted with and reading professional materials was one of the major activities of the pre-school seminar. One half hour in each morning session and one hour in the afternoon session were set aside for this purpose. A large selection of professional material on reading was provided by the participating school system and The Pennsylvania State University Reading Center. Material included both bound volumes and single issues of The Reading Teacher, multiple copies of Elementary English, Childhood Education, The Instructor, Elementary School Journal, Conference Proceedings of the International Reading Association, Supplementary Educational Monographs (University of Chicago), and proceedings of reading conferences from various other colleges and universities. In addition, copies of various textbooks on teaching reading were provided.

Certain readings were suggested and multiple copies of these materials were provided so that all participants would have a somewhat comparable basis for discussion. However, a large per cent of the scheduled reading periods was devoted to teacher's free choice reading. One very notable outcome of the stress on professional reading was the participants' informing the group of interesting and profitable reading they had found. Teachers were permitted to take any materials home providing these were returned the next seminar session.

The amount of reading of the various professional materials by participants was uniformly high. (This facet will be discussed more fully in Results,p.21). Each teacher was provided a notebook in which she could, if she wished, record notes from class sessions and abstracts of readings. The activity of reading professional materials was an unqualified success from the standpoint of amount read, interest shown and ideas shared.

Pre-Testing of Pupils: Pupils of all first grade teachers in the study (both control and experimental)were administered the following tests during the third week of school:

Metropolitan Readiness Test (Form A, 1964)

Murphy-Durrell Diagnostic Reading Readiness Test (Revised Edition, 1964)

Pintner-Cunningham Primary Test (Form A, 1964)

All first grade teachers attended a pre-testing session in which the test administration procedures were explained. The usual practice of the school system was followed in that each teacher administered and scored the above tests for her own class. After teachers had finished studying the test results, all tests were collected by the school administration and handed to the research assistant of the project.

The Twenty-Five Weekly Sessions: The second facet of the in-service program was the weekly 2 hour sessions. Twenty-five such meetings were held during the first 30 weeks of the school year. All meetings were held on Thursday night 7:00 to 9:00 p.m. The purpose of these sessions was to provide an opportunity for first grade teachers to meet together on a scheduled basis in order that they might:

1. Continue to read and discuss professional literature which might have implications for first grade reading instruction.
2. Share successful teaching procedures with other members of the group.
3. Make plans for observing in other teacher's classrooms.
4. Discuss diagnostic techniques and share with each other various informal diagnostic techniques.

Meeting Place: All meetings were held in classrooms provided by the school administration. The place of meeting was rotated so that everyparticipating teacher had the opportunity to serve as hostess in her own room for one or more sessions. This plan provided each teacher with an opportunity to point out and discuss bulletin board displays, children's art work, special interest corners, group and individual projects completed and under way, experience stories and books designed for individual pupils,and the like. Place of meeting schedules were made up several weeks in advance so that teachers could be adequately prepared to demonstrate facets of their program and the local school administration could make arrangements for use of the rooms and building.

General Format of Meetings: The weekly meetings were conducted quite informally. As teachers assembled they tended to move about the classroom examining the various materials which were displayed. Quite naturally it developed that the first activity of each meeting would be to have the host teacher explain and/or demonstrate how she used various teaching materials such as experience charts, children's drawings, materials for teaching sight words, games, bulletin boards, unit displays, commercial materials such as pictures, books, film strips, recordings which were displayed or available in the room. As a rule, there were a number of questions from teachers addressed to the host teacher.

This activity blended into a more general sharing period in which a number of teachers would demonstrate some teaching device or instructional approach to a particular learning task. In many instances, this involved something concrete to show and often involved hand-out sheets which illustrated seat work. There were no meetings in which this sharing activity did not take place and it usually extended to break time.

Coffee breaks had been scheduled in both morning and afternoon sessions of the two week seminar. The participants worked out a plan for the weekly meetings which called for each host teacher to be responsible for providing light refreshments.

Following this break the project director usually opened the second half of the session with a general question such as, "Did anyone read anything this past week which he would like to report on, or which should be called to the attention of the group?" This approach stimulated responses which in turn led to questions related to the particular facet of instruction under discussion.

Occassionally a topic was selected for the next week's meeting. By general agreement the first weekly session was devoted almost entirely to diagnostic procedures. Each teacher had agreed to have pupils make drawings of a house-tree-person. On the basis of these drawings, made prior to the administration of readiness tests, each teacher made predictions as to whether a pupil would be in the upper, middle or lower third of the class in reading achievement at the end of grade one. Pupil drawings were brought to the first weekly meeting and each teacher showed as many drawings as she wished and told her predictions for these particular pupils.

Illustrations of Sharing Activities: The research assistant to the project, who attended all of the weekly meetings, kept a log of activities and teacher sharing-demonstrations. A limited number of excerpts from various meetings are included below to provide the reader with a better understanding of this activity.

Meeting No. I

Mrs. G., the host teacher, talked briefly about activities her class was engaged in and how the materials displayed around the room were used. The most unusual item was children's work consisting of houses and buildings constructed from milk cartons. These materials had been developed as an outgrowth of working on a unit, "Our Community and Community Helpers". A second display consisted of large cut-outs which stood on a table in the front of the room. These figures were the characters which pupils would meet in stories when the basal readers were introduced. The cut-outs, the teacher explained, were a means of motivating interest in this activity.

Following this introduction other teachers in the group discussed new ideas and materials used in their work up to this time. A "ladder" of new words arranged on a shoe string was shown and described by one member. She explained that as each new word was introduced it was added to the "ladder" which was displayed in view of all the children in the classroom.

The "ladder" was used successfully in checking learning rate of sight words. She added that this was her first experience with this device and her first attempt at determining learning rate. Another member described her experience with determining learning rate in which she used a more conventional approach. Her procedure simply involved the use of the chalkboard and word cards. Final checking was done by using the cards. This teacher also stated that she had never checked learning rate in her previous teaching experience.

A discussion of teacher's experiences with the language-experience approach, (writing individual stories for pupils) revealed both positive and negative reactions. One teacher expressed disappointment because the children with whom she worked lost interest in their booklets soon after they were constructed. Several others reported outstanding success in working with reserved, withdrawn pupils. These teachers were also enthusiastic about their results in developing interest in reading and in the ease with which they could demonstrate the meaning of written symbols. A number of questions arose relative to the implementation of this approach at this time of the school year. It was asked, for example, what activities the teacher provides for the group while working with a single individual. Seat work appropriate for early first graders was mentioned and one teacher stated that she works with individual language-experience stories in the morning before her entire group arrives at school. Further discussion of effective seatwork activities was scheduled for the following meeting at which time it was dealt with in more detail.

One teacher reported a successful play-activity involving word and letter sounds. This game, "Parades" required each pupil participant to carry a card with a letter on it to another child, (or to an object in the room) whose name began with the sound of that letter. For example, Bobby might carry the letter card B to Bruce or Betty or place it on a ball or the blackboard. This was the first report of work involving phonics instruction in any form. The response of the group indicated a definite interest in similar phonics teaching activities.

A brief report was given of an article appearing in a syndicated section of a local newspaper describing work being conducted at the Gesell Institute of Child Development. The basic theme was the over-placement of children in our schools. Further discussion was delayed in order that more members of the group might have an opportunity to read this material.

Other Activities:

1. Handed out check list #1 - Early Grade One
2. Handed out lists of materials available in Curriculum Center of the local school system.
3. Displayed trade books brought from Reading Center at Penn State University.

Meeting No. 2

The host teacher discussed special bookcases which were installed in the room and which contained language-experience stories she had written for individual pupils. This gave special significance to these stories and created interest in further work of this type. Stories were taken home by children each evening and then placed back on the shelves the next morning.

During school, folders with pockets were constructed which were taken home to be kept there. As children learned new letters or words they printed these on cards, took the cards home and filed them in the pockets of the folder.

A chart was constructed and entitled, "I Am Here Today". This chart contained pockets into which each child inserted his own name card to indicate his presence in the classroom that day. It was also mentioned that newly learned sight words could be filed by the children along with their names.

Demonstrations by Other Teachers:

A. Five teachers reported using the "Parade" game described at the previous meeting, and indicated that pupil interest in this activity was excellent.

B. One teacher described a train game which required children to use sounds in order to participate. The first child played the role of the "engine" and said a word beginning with a given sound. As other children offered other words beginning with this sound they became "cars" in the train. Several trains can function simultaneously in the room, each having its own sound. When the teacher wished to halt the game she asked all remaining children to join a train, then march about the room to a train record.

C. Labeling objects in the room: Oak tag cards were shown, each of which contained the name of a familiar object in the room such as window, door, chair, desk, table, blackboard, wall, bookshelf, sink. These cards are placed face down on a table and children take turns selecting a card and placing it on the object it names. The teacher reported high pupil interest in this activity and that many pupils were learning these words as sight words.

Because the teachers showed considerable interest in the use of games as a means of introducing and developing various reading skills, the major part of one weekly meeting was devoted to sharing in this area. In addition to the contributions of the participating teachers, the Elementary Reading Supervisor played a significant role by describing and demonstrating a number of activities she found to be effective. Detailed information was provided concerning each game, the goals and objectives to be attained in terms of development in reading, and the rules and procedures to be followed in playing.

Frequently teachers who had previous experience with a game provided additional ideas regarding variations which might be tried. These innovations often increased the value of the activities described by making them applicable to a greater variety of reading situations.

Observations of Teaching: Each participating teacher was excused from her classroom teaching assignment for a minimum of three half days during the course of the project for the purpose of visiting and observing three different teachers in the project. Student teachers taught the classes of the visiting teachers after having been briefed for this experience.

Stipend for Teachers: Each teacher participating in the in-service program received the following stipend:

At the conclusion of the two week seminar	$150.00
For participators in the weekly meetings	125.00
Total	$275.00

Teaching Materials: No materials were either prescribed or proscribed. The school system which consented to participate in the experiment used, at the time of the experiment, a widely adopted basal reader series (Ginn and Co.) throughout the elementary grades. The administration and the reading supervisor encouraged teachers to use any teaching techniques which they might wish to employ. Professional books on reading instruction and professional journals devoted primarily to reading instruction were made available to ALL teachers in both the experimental and control groups. These were provided by the Penn State Reading Center and the administration of the Williamsport public schools.

4. Results

The effect of the in-service program activities were evaluated in two ways:

1. Pupil reading achievement at the end of grade one.
2. Changes in teacher behavior as revealed by teacher responses on the evaluation form and teacher evaluation of the project.

Treatment of Pupil Data: The immediately following discussion deals with item one above, treatment of pupil data. The thirty teachers who volunteered to participate in the experiment were randomly assigned to Control or Treatment groups. Pupils of all first grade teachers in the study were administered the following tests during the third week of school:

Metropolitan Readiness Test Form A (1964)
Pintner-Cunningham Primary Test Form A (1964)

In addition to the above instruments, which were used as pre-tests, The Murphy-Durrell Diagnostic Reading Readiness Test was also administered in order to provide a common data base with twenty-six other first grade reading studies carried on simultaneously and supported by the U.S. Office of Education, Cooperative Research. Data pertaining to this test will be found in Appendix B.

The end test measure of reading achievement, administered approximately the 140th day of school, was the Stanford Achievement Test (Primary I Battery, 1964). Summary data of the two predictive and five subtests of the Stanford Achievement Battery are given in Table I. The mean and standard deviations for boys and girls are presented separately for each of the two groups. Reference will be made to these means later when discussing analysis of variance.

The statistical analysis of the data embodied the analytical approach to nested factors as suggested by Harter and Lum (1955). The partially hierarchial model (or the nested or random factor design) suggested in the above reference approximated the design of the present study since the teacher

Table I - **Means and Standard Deviations Reported by Treatment Group and Sex on Stanford Achievement Test.**

	Predictor 1 (a)	Predictor 2 (b)	Word Meaning	Paragraph Meaning	Vocab.	Spelling	Word Study	
Exp. Boys (N = 167)	53.91	39.32	18.95*	19.07*	20.68*	9.81*	33.16*	Mean
	14.47	8.19	6.84	8.41	5.89	6.05	10.45	SD
Control Boys (N = 144)	52.69	40.14	17.68	17.12	19.10	8.50	30.52	Mean
	15.68	8.34	6.45	8.41	7.01	6.15	13.13	SD
Exp. Girls (N = 145)	55.32	40.53	19.79*	21.21*	20.18	11.07*	36.91*	Mean
	13.10	7.06	5.76	8.20	6.02	5.70	9.48	SD
Control Girls (N = 147)	55.26	41.87	19.44	20.59	20.54*	10.61	33.04	Mean
	14.08	7.27	6.25	8.12	6.37	5.62	13.94	SD

(a) = Metropolitan Readiness Test
(b) = Pintner-Cunningham Primary Test
(*) = (Difference in Mean favors Group Marked by *)

factor was virtually inseparable from the treatment dimension; however, further computational limitations were imposed by the variability of the sub-group n's (sex X teacher). It was necessary therefore to derive formulae which would permit treatment of the data whithin the existing complex design. The formulae as derived permitted analysis of teacher variation, treatment effects, sex differences of pupils and sex and treatment interaction, (see Appendix A for Formulae).

This analysis of variance of the end test scores revealed no significant differences in reading achievement between pupils of teachers in the control group and those in the experimental treatment group when scores of boys and girls in each group were combined.

Table II presents the structure of the analysis of variance used in Tables III through VII. These latter tables contain the results of the Analysis of each of the five subtests (end test) on the Stanford Achievement Test.

TABLE II Analysis of Variance

Source	df	SS	MS
Between Classes	n-1	SS b classes	
Treatment	b-1	SS treat.	MS_b
Error	n-b	SS_{bc} - SS treat.	MS_e
Within Classes	$na\Sigma m_{ij} - n$	$SS_{ws} = SS_{tot} - SS_{bc}$	
Sex	a-1	SS_{sex}	MS_a
Sex X Treatment	(a-1)(b-1)	$SS_{sex\text{-}treatment}$	MS_{ab}
Error (within)	$na\Sigma m_{ji} - n - (a-1) - (a-1)(b-1)$	$SS_{e(w)} = SS_{ws} - SS_{sex} - SS_{sex\text{-}treat.}$	$MS_{e(w)}$

WHERE:

k - sex
i - training method
j - class within method
l - sex within class within method
n - total number subjects
m - particular subgroup

Summary Tables-Analysis of Variance

Table III - Word Meaning - Subtest (Stanford Achievement)

Source	df	SS	MS	F
Between Classes	**27**	**3915.37**		
Treatment	**1**	**90.67**	**90.65**	**<1**
Error	**26**	**3824.72**	**147.10**	
Within Classes	**575**	**20653.04**		
Sex	**1**	**235.18**	**235.18**	**6.61***
Sex X Treatment	**1**	**43.73**	**43.73**	**1.23**
Error (within)	**573**	**20374.13**	**35.56**	

Table IV - Paragraph Meaning - Subtest (Stanford Achievement)

Between Classes	**27**	**8569.88**		
Treatment	**1**	**214.90**	**214.90**	**<1**
Error	**26**	**8354.98**	**321.35**	
Within Classes	**575**	**34030.78**		
Sex	**1**	**1125.10**	**1125.10**	**19.66***
Sex X Treatment	**1**	**107.33**	**107.33**	**1.88**
Error (within)	**573**	**32798.35**	**57.24**	

(Continued)

Summary Tables-Analysis of Variance (Continued)

Table V - Vocabulary - Subtest (Stanford Achievement)

Source	df	SS	MS	F
Between Classes	27	5337.77		
Treatment	1	58.62	58.62	<1
Error	26	5279.15	203.04	
Within Classes	575	18824.10		
Sex	1	25.44	25.44	<1
Sex X Treatment	1	145.11	145.11	4.46*
Error (within)	573	18653.55	32.55	

Table VI - Spelling - Subtest (Stanford Achievement)

Between Classes	27	4672.17		
Treatment	1	104.69	104.69	<1
Error	26	4567.48	175.67	
Within Classes	575	16646.82		
Sex	1	400.05	400.05	14.15*
Sex X Treatment	1	44.57	44.57	1.58
Error (within)	573	16202.20	28.28	

Table VII - Word Study - Subtest (Stanford Achievement)

Between Classes	26	8726.11		
Treatment	1	160.04	160.04	<1
Error	25	8566.07	342.64	
Within Classes	551	47382.02		
Sex	1	821.57	821.57	9.71*
Sex X Treatment	1	106.06	106.06	1.25
Error (within)	549	46454.39	84.62	

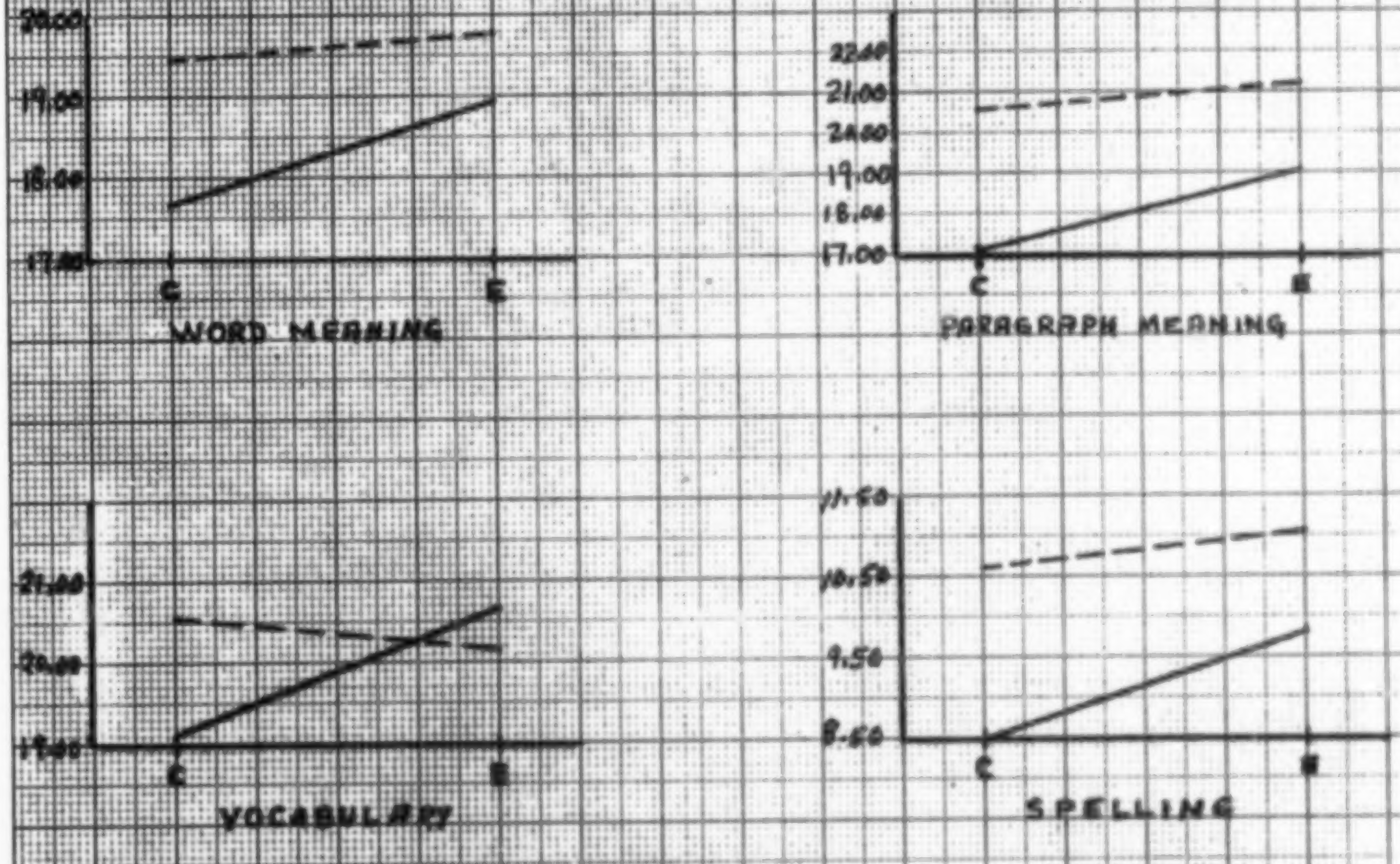
The results of the analysis of variance presented in Tables III through VII showed, for all subtests, a lack of significance for the treatment dimension, i.e., in all cases the F-ratios were less than unity. Sex differences on each of the subtests except vocabulary, proved to be significant, [F.05 (1,573) = 3.86]. Although the sex-by-treatment interaction yielded non-significant F-ratios for all subtests, again with the exception of vocabulary, there was a marked tendency for the treatment to operate so as to enhance the performance of boys. To disregard this tendency for the sake of convention, (i.e., establishing the acceptance/rejection level at .05) would be to ignore potentially useful results.

Although the sex-by-treatment did not prove to be significant there was a decided tendency in the F-ratios for each of the subtests toward significance. On all five of the Stanford Achievement subtests boys in the experimental group had higher means than did boys in the control group. These mean differences ranged from 1.27 on *Word Meaning* to 2.64 on *Word Study*.

In fact, on four of the five subtests the treatment was accompanied by higher achievement on the part of both boys and girls, but the superiority of the Experimental-boys over the Control-boys was more pronounced than in the case of comparative data for the girls (see Table I). Thus, in nine of the ten possible comparisons on end test reading achievement, the treatment groups excelled the control groups. The single instance of a control group mean exceeding that of the treatment group mean was that of girls on the vocabulary subtest. (Control mean 20.54; Experimental mean 20.18). Figure I illustrates in both graphic and absolute terms the trends discussed above.

Despite the fact that teachers were randomly assigned to treatment conditions, the possibility existed that the effects of training could be confounded by the existence of pre-treatment differences in pupil scores. This rationale

FIGURE I - Graphical Representation of Mean Performance on 5 Subtests of Stanford Achievement Test (1964) (By Treatment Group and Sex)



is based upon the fact that pupil scores were the basic units of measurement for the assessment of differences on the criterion variables. The pre-treatment or prediction variables, chosen for their intuitive relevance to the criterion variables were: 1) the Metropolitan Reading Readiness Test, Form X, and 2) the Pintner-Cunningham Primary Test. The r's between the Metropolitan and each of the Stanford Achievement subtests for each treatment X sex subgroup are presented in Table VIII. A similar and parallel presentation for the Pintner is contained in Table IX. In each and every case the r's exceeded the cut off for significance, thus justifying further examination of the data through the analysis of covariance, taken from McNemar (1962), as follows:

Model:

$$\left[SS_{tot}\,(1-R^2_{tot})\right] - \left[SS_{within}\,(1-R^2_{within})\right] = \text{adjusted } SS_{between}$$

$$\begin{array}{cccc} df & N-n & N-k-(n-1) & k-1 \end{array}$$

WHERE: N - total no. SS

n - no. of covarying variables plus 1

k - no. of treatment levels

The results of the analysis of covariance, using the Metropolitan and the Pintner as adjusting variables are shown in Tables X through XIV. Here one may note the similarity between the F-ratios obtained when the adjustments have been applied, to the unadjusted F's presented in the analysis of variance, (Tables III through VII). Thus, it would appear that adjustment had little or no effect upon the criterion means.

TABLE VIII

Correlation Between Metropolitan Readiness Test and End Year Scores on Subtests of the Stanford Achievement Test

	Boys		Girls	
Stanford Achievement	Control (N = 144)	Exp. (N = 167)	Control (N = 147)	Exp. (N = 145)
Word Meaning	.67	.56	.59	.52
Paragraph Meaning	.64	.47	.61	.53
Vocabulary	.60	.59	.54	.59
Spelling	.60	.45	.63	.47
Word Study	.50	.55	.31	.52

TABLE IX

Correlation Between Pintner-Cunningham Primary Test (beginning of year) With Subtest Scores on The Stanford Achievement (140th Day of School).

	Boys		Girls	
Pintner-Cunningham	Control	Exp.	Control	Exp.
Word Meaning	.55	.41	.48	.37
Paragraph Meaning	.55	.32	.47	.32
Vocabulary	.62	.51	.40	.51
Spelling	.46	.29	.47	.22
Word Study	.40	.44	.29	.33

Summary Tables-Covariance Analysis

__Table X__ - __Word Meaning__ - Subtest (Stanford Achievement)

Source	df	SS	MS	F
Between	1	15.77	15.77	< 1
Within	24	1095.02	45.63	
Total	25	1110.79		

__Table XI__ - __Paragraph Meaning__ - Subtest (Stanford Achievement)

Between	1	79.18	79.18	< 1
Within	24	3511.60	146.32	
Total	25	3590.78		

__Table XII__ - __Vocabulary__ - Subtest (Stanford Achievement)

Between	1	71.05	71.05	< 1
Within	24	2312.80	96.37	
Total	25	2383.85		

__Table XIII__ - __Spelling__ - Subtest (Stanford Achievement)

Between	1	51.36	51.36	< 1
Within	24	1792.28	74.68	
Total	25	1843.64		

__Table XIV__ - __Word Study__ - Subtest (Stanford Achievement)

Between	1	0.00	0.00	< 1
Within	23	5999.76	260.85	
Total	24	5994.84		

Changes In Teacher Behavior:

One objective of the study was to devise a climate for teacher growth and participation within a school system and to determine if teachers functioning in such a climate would become involved in improving their professional competence through: 1) reading professional materials and research on reading, and 2) participating freely in sharing ideas and techniques related to teaching reading.

It was felt that there were no available measuring devices which would evaluate this type of experience. Existing teacher attitude scales are primarily pencil and paper tests in which answers to items might well reflect agreement with verbal statements rather than internalized behavioral changes.

Data relative to changes in teacher behavior reported in this section were secured from each participating teacher in two ways. First, a one page Teacher Evaluation Form, (see appendix for a copy of this form) was handed in each week during the course of the project. Second, each teacher prepared a final evaluation of the project at the conclusion of the project, but prior to testing of pupils. The weekly Teacher Evaluation form consisted of the following four items:

A. List any modifications of teaching procedures, new techniques used or change of emphasis in instruction.

B. List any concepts about the teaching of reading which you have developed, modified or extended.

C. Professional materials read during the past week.

D. Evaluation of teaching the past week (note any strong points, weaknesses, omissions, insights.).

Each teacher was asked to hand in one of the Evaluation Forms each week regardless of whether she had written on any or all of the above topics.

Teacher's responses were not discussed in class and no comparisons between teachers were made. No actual reading assignments were made although on some occassions the next week's topic was agreed upon, and it was understood that those teachers who wished to do so might read on this selected topic.

Obviously some teachers read more from the professional material on reading and listed more teaching modifications than did others. Responses to the four items on the Evaluation Form varied in quantity from week to week. Item 4 above, which dealt with evaluations of teaching, elicited fewer responses than did the other items. During certain weeks all teachers were busy with some scheduled school activity such as administering and grading tests, parent-teacher conferences, preparing grade cards and the like. Usually, these heavy load periods were accompanied by less outside reading and fewer responses on the evaluation form.

From the start it was emphasized that filling out these weekly evaluations was not intended to be an activity which called for the expenditure of a large amount of teacher time. Teachers were encouraged to list items rather than to describe in great detail. For example, materials read should simply be identified rather than set down in standard bibliography form.

In describing the results of this facet of the study, the major problem is to determine how much detail should be included in order to provide the reader with a representative picture of teacher responses found on the evaluation forms. It was decided to present the responses of two teachers for each of the four items on the evaluation chart. Selection of individual teacher responses was based on the criteria of number and variety of ideas on items, 1 - 2 - 4, and amount of material read on item 3.

For purposes of identification, each participating teacher is represented by a letter A through N. These letters were assigned by a random process.

The first teacher's responses to each item below was chosen as being representative of the upper third of the group and the second as being representative of the lower third based on the criteria mentioned. The data from all teachers on all items is found in Appendix C.

Since many of the modifications of teaching and of concepts relating to instruction were of an on-going nature, teachers would sometimes list the same item on several different weekly evaluation records. Examples are continued stress on phonics, emphasis on creative writing and attention paid to diagnosis. In the summary here and in Appendix C such repeated items are cited only once.

Item I on Evaluation Form: "List modifications of teaching procedures, new techniques used, or change of emphasis".

Teacher H's Responses:

> I am emphasizing beginning sounds in words more than previously and also teaching recognition of letter names. In doing this I have used a number of new techniques and different types of presentation.
>
> In teaching handwriting this year I am trying something new and it appears to be successful. As we work on writing, I teach the sound of the letter which begins the word we are writing. I used to just stress the writing alone without consideration for teaching sounding.
>
> After reading part of the book, *Teacher* (Ashton Warner), I started using chimes to secure the children's attention.
>
> I have done more work with picture dictionaries this year. We made some in class but I also secured a copy of the *Cat in Hat* Dictionary. I have noted that several children are already aware of the differences between why we use a dictionary and an encyclopedia.

I used to view administering tests as an extra burden. This year I paid more attention to the results as a means of helping me understand children and how they differ from each other.

Children in my class are reading more story books. I think part of this is due to my change of attitude toward this activity.

I am more conscious of the needs and interests of boys. I try to remember "more praise and fewer negative responses".

Teacher J's Responses:

I am having children dictate short individual stories and then they attempt to read them.

I am using more experience charts than in previous years.

This year I am putting more emphasis on teaching letter names and I am stressing phonics instruction more than I did before.

I used the idea of the large clown as a way of teaching sight words, (demonstrated last week).

This week I used a tape recorder and recorded two reading groups - this was quite successful.

I am more conscious of the need for diagnosis. This week I began testing each child individually on certain words from the Dolch List.

Item II on Evaluation Form: "List concepts or beliefs about the teaching of reading which you have developed, modified or extended".

Teacher E's Responses:

I have a better understanding of the fact that there are many facets to teaching phonics - not just one or two.

Having "naming words" taped on objects around the room helps children learn these words "incidentally".

I have extended the belief that teachers are too pressed for time.

I feel secure that children can be taught letter-sounds as long as these sounds are blended in whole words.

I recognize my need for more approaches for teaching sight words, especially for some children.

After observing Mrs. ____ I think that writing sentences supplied by children each day is superior to using charts held over from previous years.

I have decided that every child does not need to read every story as it comes along in the text. I am more flexible in permitting boys to look at and read trade books.

I have extended the belief that children, coming from homes where oral reading is practiced by parents, have a special advantage over children coming from "reading sterile" homes.

After visiting Mrs. _____'s classroom I feel I have not been fair to my children for I have not given them near enough writing and spelling in connection with their reading.

I am using sight word teaching with flash cards - trying to do 12 to 15 words a week. (This has been going on for 3 weeks now). The children seem to be quite excited about it and often make remarks about a new word rhyming with a word learned in reading class, or commenting on meaning, etc.

Teacher N's Responses:

I see value in the practice of writing individual stories for pupils.

All phases of reading need to be used every day.

This year I am teaching more phonics. I use charts and pictures to help children work out the beginning sound in words. They look at the picture, say its name and tell which letter begins the word.

Every child should be ego-involved in learning reading.

Methods of enrichment are innumerable.

Item III on Teacher Evaluation Form: "Professional materials read during the past week".

Teacher C's Responses:

Learning to Read Through Experience, (Lee and Allen, 1963)
Improving Reading Instruction, Joint Proceedings, Reading Conference-Workshop, Summer, 1963, The Pennsylvania State University.
How to Increase Reading Ability, (A.J. Harris)
Common Sense in Teaching Reading, (Roma Gans)
On Their Own In Reading, (Gray)
Phonics in Proper Perspective, (Heilman)
The Reading Teacher (Dec. 1956; Jan. 1960; Jan. 1962; Oct. 1964; Nov. 1964)
The Elementary School Journal (Oct. 1964)
Grade Teacher (Oct. 1964; Nov. 1964; Dec. 1964)
N.E.A. Journal (Sept. 1964)
Teacher's Handbook for SRA Reading Laboratory
Reading Difficulties - Their Diagnosis and Correction, (Bond and Tinker)
Independent Activities for Creative Learning, (Darrow and Allen)
Educator's Guide to Personalized Reading, Instructor, (Walter Barbe)
These Are Your Children, (Jenkins)
American Education Research Journal (March 1964)
Teacher's Guide to Storytelling, (Wagner and Smith)
Storytelling, (Tooze)
The Education of the American Teacher, (Conant)
Pennsylvania School Journal, (Nov. 1964; Jan. 1965)
N.E.A. Journal (Nov. 1964; Jan. 1965)
The Teaching of Reading, (McKee)
Individualized Reading VS Group Reading, (Dolch)

Teaching Young Children to Read, (Warren G. Cutts, Editor)
Research for the Practitioner in Education, (Fred Barnes)
The Fifth Mental Measurements Yearbook, (Buros), Sections on Reading, Social Studies.
The National Elementary Principal, (Jan. 1965)
Educational Leadership, (Oct. 1964)
The First R, (Harvard Report on Reading in Elementary Schools)
New York Times Book Review
P.S.E.A. Journal
Summerhill, (A.S. Neill)
The Culturally Deprived Child, (Frank Riessman)
Grade Teacher, (April 1965)
The PTA Magazine, (March 1965)

Teacher K's Responses:

"When Two Vowels Go Walking", (The Reading Teacher, Jan. 1963)
"Talk Written Down", (Elementary English, Jan. 1964)
Spinster, (Warner)
Grade Teacher, (Nov. 1964)
On Their Own In Reading, (William S. Gray)
Storytelling, (Tooze)
Teaching Young Children to Read, (Warren G. Cutts, Editor)
Grade Teacher, (Jan. and Feb. 1964)
Instructor magazine
Teaching Reading, (Heilman)

Item IV on Teacher Evaluation Form: "Evaluation of teaching during the past week".

Teacher L's Responses:

I am more effective with my slower group because I try many different approaches.

I have always tended to have brighter children do the little extras around the classroom. Now I guide the less independent children into these activities because I see that they need this type of experience.

At times I feel I expect too much from the class, that I am pressuring them. I feel that this might be related to my own insecurity when I try new techniques.

My children are becoming stronger in phonics. It is interesting to see retention of vowel sounds this far.

I understand the value of on-going diagnosis but I am still not too successful in making it part of our daily work.

I slowed down in the teaching of vowel sounds because it appeared some children were not getting the material. I am reviewing consonant sounds and blends.

I may have a better insight into "individual differences" now. I am adapting my teaching (going slower) with children who have difficulties.

Teacher F's Responses:

I put greater emphasis on the more able children doing more reading from supplementary books.

I am doing more writing of individual stories. I also find it easier for me to write experience charts dictated by children.

I always tried to know what childrens needs were, but I am doing more now with diagnosis and evaluation.

I think I tend to be less impatient with the slower children.

I am using more of a variety of teaching approaches in practically all areas of reading; phonics, children's writing, learning sight words.

Major Areas of Teacher Change:

During the two week seminar and subsequent weekly meetings, some areas of research and certain teaching approaches received more attention than did others.

Teachers tended to read articles and research data which related to the areas discussed. Teacher responses listing changes in teaching and modification of concepts relative to reading instruction were quite varied; however, the majority of teaching modifications listed by teachers paralleled those areas which received major attention in the pre-school seminar and weekly meetings.

The areas which numerically drew the most teacher responses indicating change in emphasis or modification of concepts included: sex differences in learning beginning reading, stress on children's creative writing, increased emphasis on pupils' reading of trade books, the practice of on-going diagnosis, teacher's writing of individual experience stories, recognition of the need for teachers to read professional materials, and systematic and extended teaching of phonics. A limited number of representative excerpts, primarily from teachers' final reports, which focus on these topics are cited below:

Sex Differences in Learning to Read

"Sex differences in learning to read was a new consideration with me. I had never been aware of the many classroom activities which seemed geared to girls rather than to boys. This year I especially tried to include plenty of books which would be of interest to boys. I also thought of boys as I planned related reading activities in class."

"The discussion of the data on sex differences in learning to read made me think that since most first grade teachers are women we may unconsciously penalize boys. I earnestly tried to separate that which the wiggley, noisy boy absolutely should not do in relation to the welfare of all, and that which really did not matter.

This year I was boy behavior conscious not only in the classroom but in regard to playground disputes. I feel that my attitude change has made me a better teacher - at least for a number of boys."

"I was surprised at all the data which seems to indicate that boys as a group have more difficulty than do girls in learning to read. I now am conscious of some of the factors which might account for this: boys mature more slowly; many reading materials appeal more to girls; boys receive more negative responses from teachers. In my teaching this year I tried to consider these points and provided more materials and activities with 'boy appeal'."

Children's Creative Writing

"The individual teacher-made booklets later served as an incentive for the children to write stories of their own which were made into similar booklets. We did much more sentence writing than in other years. We made picture dictionaries for different seasons and special holidays and used magazine pictures as stimulus for story writing."

"This year for the first time I have had children write experience stories of their own. I began creative writing by letting children write about pictures, holidays, or one of the seasons. We made word dictionaries, printed common words on cards, and placed seasonal vocabulary on the board. With these helps children do quite well in their story writing."

"We did more individual story writing this year than previously. There were great differences among children as to the amount of writing but they all wrote stories. Children helped themselves by using dictionaries, flash cards, books, word cards and the like. I appreciated and used the many suggestions given by the other teachers specifically the use of pictures as a stimulus, or suggesting a title for a story and class discussion of a particular item prior to writing stories."

"One major change in my teaching was the addition of creative writing. I believe this was a source of considerable enjoyment and growth for my first graders. My using this approach was a direct result of the sharing and demonstration of ideas in our various sessions."

Children's Reading of Trade Books

"This is the first year I included trade books on the library shelves. I had always used other basal series and their supplementary readers. I found the trade books were chosen more often than I expected. Only three of my 28 pupils did not read any trade books. Twenty-one pupils read between ten and thirty-seven books. The best reader in the group read over sixty trade books.

I used Mrs. _____ suggestion of setting one day per week aside for library-book reading. On Fridays we did not use basal readers; everyone read from library books."

"This year there has been an increased interest in library book reading. In previous years a few children might read as many as thirty or more books. This year there have been quite a few more who have done so. This has raised the average number of books read by all the children. In addition, many more children have acquired cards from the public library and have been reading library books also. There has also been a difference in the type of books read in that children have read more trade books and fewer basal readers, (other than the adopted series)."

"I have a much stronger library program this year than I ever had before. This is a direct outgrowth of this reading project. We developed individual bookworm charts which the children enjoyed a great deal. (A segment was added to the bookworm for each book read.) This class read a great many more story or trade books this year than any of my previous classes. I was amazed at how many books some of the better readers read."

On-Going Diagnosis

"This year I learned the importance of continuous diagnosis. When using basal readers or workbooks I am constantly checking various reading skills. I have seen the value of keeping records for each child. As a result of writing down comments and actual errors made one can often note patterns of errors which otherwise might be missed. One outcome of the stress on on-going diagnosis is that this year I have changed a number of pupils from one group to another as they progressed or fell behind in reading."

"I have a better understanding of what is meant by 'learning to read is an individual experience.' This has resulted in more emphasis on individual diagnosis. I am convinced that diagnosis should not be a 'once in a while activity' but must start at the beginning of the year and be a continuous process. Even though diagnosis takes time, instruction becomes more efficient and thus you save time in the final analysis."

"There is one phase of reading instruction that this project has helped me understand better. This relates to the desirability of on-going diagnosis. I feel that in this area I have perhaps not done as much as I should have. I am afraid I try to keep too much information in my head. Next year, I hope to do more of an anecdotal-type record on each child."

Writing Individual Experience Stories

"In previous years pupils with my assistance had often written group experience charts. However, I had never made individual experience booklets for each child. This year I wrote such stories for every pupil in the class.

These story booklets were placed on the library shelf and children do read them."

"One of the things I did this year for the first time was writing individual stories for each child early in the year. The child would dictate a story which I would write down. This was made into a little book which the child illustrated. These booklets helped to create interest in reading and many children learned to read their own and other pupil's stories."

Teacher's Reading Professional Materials

"I found the two week seminar prior to the opening of school very beneficial. I welcomed the opportunity to have such wealth of professional material available - as well as time provided for reading it. It was very helpful to have these materials available all during the school year."

"In recent years my reading of professional materials on reading instruction has been very limited. (Usually articles in popular magazines.) This project offered me an opportunity to read from a vast array of professional materials. I read research reports and experiments and from discussion of these gained a great deal of background knowledge which I simply did not have before."

"Exploring the vast field of professional literature which was made available as part of this project, resulted in my trying a number of new ideas which children. On several occassions I ran into ideas which were at variance with what I presently believed and practiced. Such experiences caused a number of us to take a long look at what we have been doing. In my own case, I revamped a number of practices."

"Another rich experience was the opportunity to read. The thing I liked was the fact that there were so many books and periodicals available. I was surprised to learn that a number of these materials were available in our own school district - I wasn't aware of this before. I did more reading of professional materials this year than ever before and I think I now have the 'reading habit'."

Teaching Phonic Analysis Skills

"Throughout the early part of the project I was a bit skeptical about increasing the amount of phonics instruction in first grade. One of the observations I made in another teacher's class convinced me that first graders can learn more phonics and that this is a big help to the pupil."

"I placed more stress on teaching of initial consonant sounds this year. Also, I had never before taught vowel sounds at first grade level. I see that children's ability to use these skills relates to their ability to read independently."

"This year I began teaching letter sounds as heard in words very early. Previously I did not start this until children were in the primer. We used many more different approaches to teaching phonics this year."

"I did much more with the teaching of letter names and sounds. I started teaching initial letter sounds in words earlier in the year and did this more systematically. I found most of the children could learn vowel sounds and when they did, this skill made a real difference in their reading."

Assimilation of New Ideas and Future Growth

One reaction which was not anticipated but which became obvious as the project progressed was that teachers felt they were not able to totally assimilate all of the new ideas to which they were exposed.

There were numerous instances of teachers reporting the use of a new approach, but feeling that they fell short of achieving maximum results from its use. Often the point was made that with more practice and with adaptations which might better suit a particular teacher's style of teaching, these new ideas would prove to be more effective. As one teacher expressed it, "I believe that next year the experience gained in the project will prove more effective than this year. There were just too many ideas for me to master thoroughly." A few comments of other teachers follow:

"I suppose one can never know how much difference this year's experiences have made in our children's work over and beyond what it would have been without the project. I do know that the project has made a difference in my classroom and my methods of teaching. For example, my room has been more attractive in appearance and my program more functional and interesting as a result of my experiences in the project.

There were some things I tried which I felt did not work too well and which I may not try again. There were some things I wanted to try but did not find the time to fit them in this year. A majority of the new approaches I tried I will continue to use."

"My professional growth can not be measured completely this year, I am sure. I will be able to apply certain concepts and practices in years to come because I do have a strong desire to improve my teaching."

"The value to me of the experiences I have had in this project will continue long after the experiment closes. I am already making plans for the future. Some techniques I observed this year were not well suited to my group. I am beginning to see how I can adapt them to any group. Some ideas proved quite successful in practice and I will continue to use them. There were other approaches which looked promising but which I did not have time to incorporate into my teaching. These I plan to use next year."

"I have several children who I wished I had stepped up into more difficult reading. I think I didn't keep these children reading up to their maximum ability. I will try to remedy this next year. You see, we are still learning and I believe I will be able to make better use next year of some things we learned, than was the case this year."

Summary:

The purpose of this investigation was to study the effects of an intensive in-service program on, 1) teachers' classroom behavior and 2) reading achievement of pupils taught by participating teachers. The questions explored were, "can a long term intensive in-service program develop a climate for learning-sharing which would result in first grade teacher:

1. becoming conversant with significant research which is pertinent to to beginning reading instruction;
2. reading widely from the professional literature on reading instruction;
3. sharing teaching techniques and teaching procedures;
4. modifying and/or extending their concepts relative to reading instruction?

If the above goals of an in-service program are achieved, will teachers' classroom behavior be modified? And if so, will the resultant teachers' classroom behavior have any effect on pupils' reading achievement at the end of grade one?

Experimental Study: Thirty first grade teachers of the Williamsport, Pennsylvania public school volunteered for the experiment. Half of this group were selected by random process to serve as the experimental group; the remaining teachers served as a control group.

Teachers in the experimental group, 1) attended and participated in a two week pre-school seminar and 2) attended and participated in 25 two-hour seminar sessions held during the first thirty weeks of the school year 1964-65.

The Two Week Pre-School Seminar was held prior to the opening of school, fall 1964. Daily sessions were scheduled Monday through Friday from 9:00 a.m. until 4:00 p.m.

The content of the seminar focused on analysis of reading research related to first grade reading instruction, and selected "newer trends" in beginning reading. Major topics discussed and activities pursued included:

1. Discussion of research on reading readiness.
2. Study of data showing relationship between children's knowledge of, or ability to learn letter-names and letter sounds with success in first grade reading.
3. Childrens' language development.
4. Study and discussion of data relating to sex differences in learning beginning reading.
5. Importance of on-going diagnosis, implications for first grade teachers.

Twenty-five Weekly Meetings comprised the second facet of the in-service program. These two hour meetings were held during the first 30 weeks of school. Their purpose was to provide a framework in which first grade teachers:

1. Worked together in identifying, discussing and evolving tentative solutions to common problems of teaching in grade one.
2. Demonstrated their own successful teaching techniques to the group.
3. Prepared teaching materials which were made available to each participating teacher. (Individual teachers were free to modify any procedures.)
4. Observed each other in actual classroom situations for a number of half days.
5. Read and discussed professional materials in the area of reading.
6. Worked cooperatively on the problem of achieving "continuous diagnosis" of each pupil in their respective classrooms.

Pupil Data: All pupils in the classes of both the experimental and control teachers were administered the Metropolitan Readiness Test and the Pintner-Cunningham Primary Abilities Test as pretests. No significant differences were found between control and experimental pupils on these measures.

Following the 140th day of instruction, pupils were administered the five reading subtests of the Stanford Achievement Test, Form X. Transfer students and those pupils for whom data was incomplete on either pre or post tests were dropped from the experiment. Complete data were analyzed for a total of 603 pupils distributed as follows: experimental boys, 167; control boys, 144; experimental girls, 145; control girls, 147.

Analysis of variance of end test scores (Stanford Achievement Test) revealed no significant differences in reading achievement between pupils of teachers in the control group and those in the experimental treatment group when scores of boys and girls in each group were combined. However, the mean differences which were obtained favored the experimental group in nine out of ten instances.

Mean scores of boys in the experimental-teacher group exceeded those of boys in the control group on all five of the reading subtests of the Stanford Achievement. Mean scores of girls in the experimental-teacher group exceeded those of girls in the control group on four of the five subtests, but the differences in three of these instances were smaller than those registered by the experimental boys. The sole exception to the trend noted was the control-teacher taught girls higher score on the vocabulary subtest.

A factor which may have influenced results to some degree is that those teachers who comprised the control group had volunteered for the in-service program and were aware of both the goals of the experiment and to some extent the activities carried on by the experimental-group teachers. No effort was made to inhibit the experimental teachers from discussing these activities or even sharing ideas with their colleagues in the control group. In fact, there were several indications that some degree of interaction did take place.

It was planned that the degree to which these factors may have influenced control-teacher behavior and pupil achievement would be evaluated in a second year follow-up study. It was hypothesized that effectiveness of teaching which resulted from actual teacher-change would be reflected in pupil achievement in succeeding years. On the other hand, if the psychological factor of control-teachers' knowledge that an experiment was in progress had affected their pupils' achievement, this factor would not be operative the year following the termination of this study.

Sex Differences: During the two week pre-school seminar and in subsequent weekly meetings, the discussion of research on reading included data which indicates that girls as a group are superior to boys as a group on reading achievement during the first two or three years of formal reading instruction. Differences in achievement found in this study, in general, also favor girls.

However, there was a strong indication that the experimental treatment had a positive effect upon reading achievement of boys in the classrooms of the experimental-teacher group. In addition to the fact that the mean achievement of boys in the experimental-teacher group exceeded that of boys in the control-teacher group on each of the five subtests on the Stanford Achievement Test; the mean of the experimental-teacher taught boys exceeded that of both the experimental and control-taught girls on the Vocabulary subtest; and control-taught girls on the Word Study subtest.

Changes in Teacher Behavior: It was felt that there were no instruments available which would be appropriate for measuring changes in teacher behavior which might result from the above experiences. Existing teacher attitude scales might well reflect agreement with verbal statements rather than internalized behavioral changes. A record of changes in teacher behavior were secured from each participating teacher in two ways. First, a one page teacher evaluation form was handed in each week during the course of the project. Second, each teacher prepared a final report at the conclusion of the project but prior to testing of pupils.

The evaluation form which teachers handed in each week consisted of the following four items:

1. List any modifications of teaching procedures, new techniques used or change of emphasis in instruction.
2. List any concepts or beliefs about the teaching of reading which you have developed, modified or extended.
3. Professional materials read during the past week.

4. Evaluation of teaching the past week (note any strong points, weaknesses, omissions, insights, etc.).

In response to the above items the 14 teachers listed 86 changes in teaching procedures; 97 modifications of concepts relating to reading instruction; and read 271 professional books and journal articles. The changes most frequently cited by teacher were:

1. Teacher awareness of sex differences in learning to read and teacher's efforts to devise motivating experiences for boys.
2. Incorporating children's creative writing with reading instruction.
3. More teacher emphasis on on-going diagnosis.
4. Increased emphasis on pupil's reading trade books in addition to basal materials.
5. Teacher's writing of experience stories for individual pupils.
6. Teacher's recognition of the need for wide reading of the professional literature related to reading instruction.

Assimilation of New Ideas and Future Growth: One teacher reaction which was not anticipated but which became obvious as the study progressed was that teachers felt they were not able to totally assimilate all of the new ideas to which they were exposed. There were numerous instances of teachers reporting the use of a new technique but feeling that they fell short of achieving maximum results. In most cases, teachers expressing this view felt that with practice they would become more proficient in utilizing new procedures.

The climate for growth is without doubt one of the major factors in the relative success or failure of any intensive long term in-service project. The school administration plays a key role in stimulating this climate. This study was conducted in an optimum climate for teacher growth. It was welcomed by the local school administration without reservations. The assistant superintendent and reading consultant attended all sessions. Materials, rooms and other facilities were provided; arrangements were made for teacher visitations to other classrooms, and no activity of the project was vetoed or curtailed.

Conclusion:

One of the more significant findings of this study is that, given a proper climate for learning and sharing ideas, teachers will work cooperatively to upgrade the effectiveness of their teaching and the level of teaching in the community. A related finding was that the teachers involved in this study demonstrated a surprisingly large array of teaching techniques and classroom learning activities which were "new" to their teaching colleagues in the same community. Based on the data gathered the following conclusions appear to be warranted.

A. The experiences provided in the intensive in-service program described were conducive to helping teachers:

1. become conversant with selected research on reading which was pertinent to beginning reading instruction.
2. understand the implications of this research to their daily classroom activities.
3. modify classroom practices and teaching procedures as a result of increased knowledge about reading instruction; and as a result of observing other teachers demonstrate teaching techniques.
4. realize the importance of continued professional growth based on study of the professional literature on reading instruction.

B. While the mean reading achievement of all pupils taught by the experimental-group teachers did not differ significantly from that of pupils taught by control-group teachers, those differences which were found favored pupils taught by the experimental-group teachers on nine out of ten measures. In-service training which resulted in teacher awareness of sex differences in learning to read appears to have evoked classroom practices which tended to enhance the performance of boys.

C. There is evidence that changes in philosophy, teacher's use of new techniques, and teacher's attitudes toward personal responsibility for continued professional growth will operate beyond the time limit encompassed by the project.

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APPENDIX A

FORMULAE

Formulae for Analysis of Variance of Nested Data (As generated by Dr. Paul Hurst, Institute for Research, State College, Pa.)

$$G = \sum_{i=1}^{i=2} \sum_{j=1}^{j=14} \sum_{k=1}^{k=2} \sum_{l=1}^{l=14} X_{ijkl}$$

$$SS_{\text{Total}} = \sum_{i=1}^{i=2} \sum_{j=1}^{j=14} \sum_{k=1}^{k=2} \sum_{l=1}^{l=14} X_{ijkl}{}^{2} - \frac{G^2}{N}$$

$$SS_{\text{Treatment}} = \sum_{i=1}^{i=2} \frac{\left(\sum_{j=1}^{j=14} \sum_{k=1}^{k=2} \sum_{l=1}^{l=14} X_{ijkl} \right)^2}{n_i} - \frac{G^2}{N}$$

$$SS_{\text{Between classes}} = \sum_{i=1}^{i=2} \sum_{j=1}^{j=14} \frac{\left(\sum_{k=1}^{k=2} \sum_{l=1}^{l=14} \right)^2}{n_{ij}} - \frac{G^2}{N}$$

$$SS_{\text{Sex}} = \sum_{k=1}^{k=2} \frac{\left(\sum_{i=1}^{i=2} \sum_{j=1}^{j=14} \sum_{l=1}^{l=14} X_{ijkl} \right)^2}{n_k} - \frac{G^2}{N}$$

$$SS_{\overline{\text{Sex-treatment}}} \quad \sum_{i=1}^{i=2} \sum_{k=1}^{k=2} \frac{\left(\sum_{l=1}^{l=14} \sum_{j=1}^{j=14} X_{ijkl} \right)^2}{n_{ik}} - \frac{G^2}{N}$$

$$SS_{\text{Sex-treatment}} = SS_{\overline{\text{Sex-treatment}}} - SS_{\text{sex}} - SS_{\text{Treatment}}$$

WHERE:

k = sex
i = training method
j = class within method
l = sex within class within method
N = total no. Ss
n = no. of pupils in particular sub group

APPENDIX B

INTERCORRELATIONS BETWEEN PINTNER-CUNNINGHAM, MURPHY-DURRELL, STANFORD ACHIEVEMENT, AND METROPOLITAN TESTS

TABLE XV

Correlation Between Each Murphy-Durrell Subtest and Each Stanford Achievement Subtest

Murphy-Durrell Subtests	Boys		Girls		Stanford Achievement Subtests
	Exp. (N = 167)	Control (N = 144)	Exp. (N = 145)	Control (N = 147)	
Phonemes	.58	.57	.47	.52	**Word Meaning**
	.44	.49	.46	.51	**Para Meaning**
	.53	.49	.47	.39	**Vocabulary**
	.48	.53	.32	.49	**Spelling**
	.48	.47	.41	.28	**Word Study**
Capital Letter Names	.43	.59	.44	.56	**Word Meaning**
	.50	.55	.47	.51	**Para Meaning**
	.31	.50	.44	.40	**Vocabulary**
	.44	.51	.50	.53	**Spelling**
	.40	.35	.53	.26	**Word Study**
Lower Case Letter Names	.45	.63	.47	.57	**Word Meaning**
	.53	.54	.51	.59	**Para Meaning**
	.31	.53	.45	.43	**Vocabulary**
	.44	.53	.46	.59	**Spelling**
	.41	.47	.53	.22	**Word Study**
Capital and Lower Case Names	.46	.63	.48	.58	**Word Meaning**
	.53	.57	.52	.57	**Para Meaning**
	.31	.52	.46	.43	**Vocabulary**
	.44	.54	.51	.58	**Spelling**
	.41	.42	.55	.24	**Word Study**
Learning Rate	.42	.43	.37	.41	**Word Meaning**
	.39	.47	.32	.41	**Para Meaning**
	.35	.36	.31	.43	**Vocabulary**
	.36	.37	.30	.58	**Spelling**
	.36	.32	.35	.24	**Word Study**

Table XVI - Correlation Between Pintner-Cunningham and Total Metropolitan Readiness Test

Boys		Girls	
Control (N = 144)	Experimental (N = 167)	Control (N = 147)	Experimental (N = 145)
.78	.76	.64	.69

Table XVII - Correlation Between Pintner-Cunningham and Each Subtest of the Metropolitan Readiness Test

Metropolitan Subtest:	Boys		Girls	
	Control	Experimental	Control	Experimental
Word Meaning	.55	.56	.26	.12
Listening	.46	.42	.29	.38
Matching	.57	.63	.57	.53
Numbers	.64	.63	.51	.61
Copying	.59	.57	.59	.48
Alphabet	.48	.38	.39	.28

Table XVIII - Correlation Between Pintner-Cunningham and Each Subtest of the Murphy-Durrell Diagnostic Reading Readiness Test

Murphy-Durrell Subtests:	Boys		Girls	
	Control	Experimental	Control	Experimental
Phonemes	.55	.50	.47	.45
Capital Letter Names	.48	.38	.45	.24
Lower-Case Names	.46	.34	.43	.31
Cap. & Lower-Case Names	.48	.38	.45	.29
Learning Rate	.42	.45	.38	.35

Table XIX - Correlation Between Metropolitan Readiness (Total score) and Each Subtest of Murphy-Durrell Diagnostic Reading Readiness Test

Murphy-Durrell Subtests:	Boys		Girls	
	Control (N = 144)	Experimental (N = 167)	Control (N = 147)	Experimental (N = 145)
Phonemes	.66	.59	.65	.58
Capital Letter Names	.73	.62	.67	.64
Lower-Case Names	.73	.61	.70	.63
Cap. & Lower-Case Names	.76	.64	.71	.66
Learning Rate	.57	.60	.36	.42

APPENDIX C

TEACHER EVALUATION FORM

TEACHER RESPONSES TO ITEMS ON THE EVALUATION FORM

NAME ____________________

DATE ____________________

TEACHER EVALUATION FORM

Were any items listed under I-II-III tracable to the seminars?

YES	NO

I. List any modifications of teaching procedures, new techniques used or change of emphasis:

A.

B.

C.

D.

E.

II. List any concepts or beliefs about the teaching of reading which you have developed, modified or extended:

A.

B.

C.

D.

E.

F.

III. Professional materials read during past week:

A.

B.

C.

D.

IV. Evaluation of my teaching the past week (note any strong points, weaknesses, omissions, insights, etc.)

Item I: "List any modifications of teaching procedures, new techniques used, or change of emphasis."

Teacher A

I am writing more individual stories for children. For the first time I checked pupil's learning rate on sight words. I am putting more emphasis on word analysis, particularly on initial consonant sounds.

I correlated music with the reading lesson. I wrote the words of a song on large easel paper and used this material for teaching words and calling children's attention to blends in words.

The class and I constructed a large "class book" based on a nursery rhyme we were studying. Each child contributed an illustration for this project.

This week we made individual dictionaries based on words associated with Halloween. As a follow-up, children wrote their own stories using many of the words in their dictionaries.

I am putting more emphasis on outside reading of story books (trade books). This has been a big help with the better readers but not much help with the poorer readers.

I am more conscious of diagnosis of children's reading this year. This is not easy but I will improve with time and practice.

Teacher B

This year I am placing more emphasis on teaching sight words. I use more approaches than previously.

I am writing more individual stories for pupils. We are doing more work with picture dictionaries made in class. The class and I made a large Halloween dictionary.

During the Thanksgiving season each pupil developed a story book with a number of drawings.

I am less rigid in holding to three groups this year.

I believe I do better in diagnosing children's reading skills and because of this I think I am being a bit more helpful to some of the boys in the group.

Teacher C

I used the sight word "learning rate" approach for the first time. It is a useful diagnostic technique.

I know that I stressed learning letter names more this year than last.

As a result of other teacher's demonstrations, I have learned and used more techniques for teaching listening skills and auditory discrimination of sounds in words.

I am much more conscious of the fact that instruction must be based on knowledge of what the child knows and doesn't know. I tried grouping students on the basis of their scores on subtests of the Readiness test. This moves children around in different groups quite frequently.

I am attempting to get more pupil participation than in previous years. This is a definite improvement over the teacher-drill approach I have used. I recall the data which indicates that teachers often ignore boys and I am guarding against this.

Pupils are reading story books more this year than in my previous experiences, as a result the children are doing more silent reading.

I am using several of the more advanced pupils as drill leaders in sessions with children who need practice on recognizing letter names and sight words. This has worked very well, interest is high and children do learn in this situation.

We have had good success with writing individual stories.

Teacher D

I have stressed learning of letter names more than in previous years.

This is my first year to write individual stories for children. In a number of cases this has worked quite successfully but a few children did not seem to be motivated by the stories.

As a class, we have done more creative writing than in previous years.

I have used quite a few suggestions from other teachers and this variety of approaches has made learning more interesting for the class.

Teacher E

I use "naming words" around the room much more than previously. This helps pupils learn and review a number of sight words.

I tried the large class-project-book for the first time. This was motivating to the children.

I have "borrowed" many techniques from the demonstrations for teaching sight words.

This year students are writing more stories on their own. I like the idea of showing a picture stimulus and having children write about the picture.

I am more conscious of children's ego needs - I give much more praise than I have before.

I am trying to be more thorough in teaching word analysis this year and am putting more emphasis on phonics.

Teacher F

I am paying more attention to diagnosis.

I am teaching letter names and using the learning rate technique to help me get a picture of how each child is doing on this activity.

We have been building individual dictionaries for each of the holidays and special occassions. Children like this activity and it helps them learn sight words.

This year I am trying the individual story approach in addition to the group charts which I always used.

I am more conscious of children's need for approval and success - particularly so with boys since learning that they have more difficulty with learning to read.

I am doing a better job of teaching phonics (consonant sounds). I am using many different approaches, a number of which I saw in the demonstrations by other teachers.

This year I am providing more practice on learning sight words. In writing sentences I try to use as many words from the Dolch List as possible.

Teacher G

I am making more extensive use of labeling objects around the room and "do what the sentence tells you" games. Here we use oaktag cards which contain directions such as "walk to the window", "open the door","say Hello to ______".

We have done more creative writing this year than previously.

This year I am more successful at working reading into all other activities - writing songs on the board, words and sentences in arithmetic, and experience charts for science.

We are using trade books much more extensively this year. I have been encouraging children to read and take books home. This has motivated many children to read story books.

We have worked more on auditory discrimination and letter sounds in words than in the past.

Teacher H (Responses found in text, page)

Teacher I

I write several individual stories each day. Previously we had used group charts exclusively.

This year I stressed the learning of letter names and also have worked more extensively with learning the sounds of consonants.

Although I have had faster learning groups at times, I am finding that this year even with my present groups I can "take them farther" than I had thought possible.

My pupils are much more interested in reading "library books". This is the first year I have asked parents to sign and return a form after their child finished a book. The parents' cooperation and interest has been most gratifying.

This is the first year I have used the idea of picture dictionaries. We made some as class projects and some were individual. These were built around words associated with special days and holidays.

I require less oral reading on the part of the better readers. They do more silent reading on their own.

I feel more at ease in diagnosing children's reading ability - and I think I do more with diagnosis this year.

Teacher J (Responses found in text, page)

Teacher K

This year I am including more creative writing on the part of pupils.

I am more successful with "units" this year. We just completed one on science which involved the study of seeds. I was able to stress reading throughout.

I am using a larger variety of teaching approaches. This is particularly noticable to me in teaching phonics. I have adapted many suggestions from our group discussions and demonstrations.

I have experimented with the use of more written directions rather than relying on oral instructions. This helped children see the need for and purpose for reading.

Children are reading more trade books this year and they read them earlier in the year than was my usual practice.

I introduced the study of vowel sounds much earlier this year. In the past we did this just in the last two or three weeks of school.

Teacher L

This year I am writing stories which the children dictate to me. I deliberately make sure to include some shy boys each day.

We are working on letter names and I am using the learning rate technique we discussed earlier.

I am using many more approaches to teaching sight words this year. This variety of approaches seems to pay off in better learning.

We are stressing phonics more but I am trying to do this through including words in sentences.

I am using a wide assortment of pictures which serve as a stimulus for children's creative writing.

(A number of specific games and teaching techniques noted in various demonstrations were mentioned as helps in teaching).

Teacher M

I have a clearer understanding of the many ways in which I can gain information about children's reading and the skills in which pupils need more practice.

This past week I wrote an experience story for each pupil in the class. I had never tried this approach before.

In the readiness period this year I stressed learning letter names more than previously.

I note that my pupils are writing sentences earlier this year than in previous years.

I am using a number of suggestions from other teachers for teaching and reviewing sight words.

Teacher N

I am more efficient in scheduling independent seat work this year.

This year I have put more stress on learning letter names and in teaching initial consonant sounds.

I am writing individual stories as well as experience charts for the whole class. Formerly, I did only the latter.

Children moved into reading supplementary books or library books earlier this year. They are reading more of this type of material and seem to enjoy it greatly.

II. "List any concepts or beliefs about the teaching of reading which you have developed, modified or extended."

Teacher A

I came to realize that in the case of many students, creative writing seemed to help reading.

I now believe that sounding the first part of a word, usually an initial consonant or blend, will be enough of a clue to help the child get the unknown word.

This year after the first two months of school, I taught more phonics than in previous years. I am convinced that this has a good effect on children's reading.

I have written more individual experience stories this year, as a result of our group discussion and demonstrations by other teachers. I now feel this approach is very effective with a number of pupils.

I gained some new insights into the readiness period. In the past I kept some pupils at these activities too long. This year I started one group on reading much earlier than I did in previous years.

I am convinced that I have not done enough reading of professional materials in the area of reading. This year I read more than in previous years and found I enjoyed it as well as finding it very useful for teaching.

Teacher B

I developed the habit of testing quite frequently to find the children's learning rate.

This year I wrote individual stories for each of the children and found it was a good way to get them interested in writing stories of their own.

This year I was more conscious of the needs of poor readers, especially boys. I tried to prevent them from becoming discouraged and bored.

I became more conscious that audio-visual readiness is necessary before the child can read.

I learned and used new ways to develop listening skills, and introduced teaching techniques earlier than they were presented in the teacher's guide.

I found it difficult to properly use experience charts. It seemed to me that there were so many more important things to teach.

This year the top children really pushed ahead, more so than in other years. The most advanced group did more individual reading this year.

I found that I needed to do more individualized work so I set up a free reading period several times a week.

I presented the phonics instruction faster than in previous years because the better readers were ready to use it sooner. In past years I had waited until the majority learned each step.

Teacher C

I now realize that the intelligent use of diagnostic techniques is basic to efficient teaching of reading.

I have discovered that the learning rate of most pupils corresponded to my own rating through observation, if at the above average or below average level. I was surprised to find that many children whom I considered average actually had a higher or lower learning rate than I expected. I developed the belief that this technique is valuable in that it gave me a more accurate picture of the learning rate ability of what I, in the past, considered an "average" pupil.

I developed the belief that some of the simpler activities which helped strengthen reading were handled effectively by the children themselves, leaving me more time to concentrate on teaching the more difficult reading concepts.

The children were capable of learning and applying more phonic's generalizations than I had been accustomed to teaching in the past.

I firmly believe that to be an effective teacher of reading one must take the initiative in keeping oneself aware of the results of research and its implications for the improvement of instruction. I hadn't realized how many people were investigating the different facets of reading and making their findings available to us teachers.

I have discovered that creative story writing creates a desire in the children to learn things that will help them spell words. The children saw a need for the study of letter sounds and they seemed to use these generalizations more effectively because of their story writing.

I found that it was not necessary for each child to read orally every day. In fact, this practice would have had little value for some children. I found that diagnosis helped here.

I found that no one technique should be used for all children simply because it is successful with the majority, and no technique should be completely discarded because the majority do not benefit from it.

Teacher D

I used individual experience stories in my classroom earlier this year than in past years.

I taught consonants first this year, and names of the letters of the alphabet earlier.

I did more on-going diagnosis of the children's work than in past years.

I found that the learning rate test was a good indication of readiness for reading.

My belief that children should be taught letter names in readiness work has been strengthened this year.

I have learned and used several new approaches for providing enrichment activities and I am more conscious of using these to help boys like reading.

Teacher E (Responses found in text, page)

Teacher F

I believe now that teaching consonant sounds at the beginning of words is a most important part of the word analysis program.

This year I taught vowel sounds, long sound vowels first, then short vowel sounds. The more mature children began trying to apply their vowel information.

I have found that much review of beginning consonant sounds is required for learning to read new words earlier in the year.

Since we used and worked on beginning sounds more this year, the children seemed to be more aware of them, and were better at recognizing them.

This year we did more writing in class.

Teacher G

I am convinced that I can and should use trade or story books much more extensively. This year I found that children like these books and the class did much more outside reading than other groups I had taught in previous years.

I learned that I could teach many sight words by labeling objects and pictures around the room. I used this approach more extensively after observing other teachers' classrooms.

From mid-year on I taught phonics more extensively than in previous years.

The ability to sound out letters helped a number of children to be better spellers. They used more words in their creative writing periods. As a result I stressed creative writing more this year.

This year I have been more successful in combining reading with other subjects such as art, music and science.

I am more effective in using enrichment techniques this year. I stress this more because of what I have seen other teachers do.

Teacher H

I have found that I do not have to teach all of the material in equal amounts to all of the children.

In most cases I was a little slow in starting experiences in reading, but I have found that when the children are in first grade they are ready for reading.

I know now that reading is the most difficult process a child has to learn, and boys have more difficulty in learning to read.

Testing has helped me know the degree of readiness of each child, and I am now in favor of any test that will help me to know more about a child.

In the teaching of letter names I included their sounds and words to accompany them.

I stressed the beginning sounds in new words more this year and I found that my children were more proficient in sounding out new words than has been the case in past years.

This year I included more supplementary materials along with the usual basal reader series. I particularly tried to find materials of interest to boys.

I began the teaching of vowels and consonants much earlier this year and found the children more successful with their learning.

I now believe that any materials that give the slow learner satisfaction and success, easy or not, should be used and the growth of their reading abilities will be automatic.

Teacher I

I have concluded that in the past I continued the readiness program too long with some of the bright children who were ready to read. I have shortened this period with these pupils. Children who are ready to read do not benefit by being kept in the readiness program.

I found in my group that knowledge of letter names was indicative of success in beginning reading.

This year I expanded use of individual experience stories and found it created more interest in reading and also more facility in composition and the use of complete sentences.

I have found that by teaching phonics more intensively the better children develop the ability to use sounding earlier than in previous years. The other children made progress in recognizing the sounds of letters but it was slow.

In the past I had every child read orally every day, but this year I cut down on the amount of oral reading with the better readers.

I have found that this year my children were better able to identify their consonant sounds than in past years, and learned their long and short vowels earlier.

I was amazed at the amount and the quality of the compositions that my children wrote this past year. I had done some work along this line in the past but not on the scale that I did this year.

This past year, the children were much better spellers. They seldom asked me how to spell a word.

Teacher J

I am now convinced that teaching letter forms and letter names should start from the very beginning of the year.

I have put more emphasis on teaching vowel sounds this year than in the past.

I see now the necessity of pointing out the exceptions of phonic generalizations in teaching phonics.

This year I did more individual diagnosis, and grouped the children according to difficulties they were having. In past years I didn't make use of testing and diagnosis to the extent I did this year.

I did more re-teaching or reviewing of particular skills with those children who needed extra drill. Because of this I think I am being more helpful to some of the boys in the group.

Teacher K

This year I placed more emphasis on creative writing. We have noticed in our outside reading that "what a child can write, he can read". This results in confidence and success. I am extending my efforts to meet the specific needs and interests of the boys in this creative experience and to involve every child in our developmental activities.

I found I was able to teach the vowel sounds as the needs of the children evolved. However, I do feel children benefit by an early introduction to vowels, which in turn helps them in unlocking new words.

I learned that my own predictions this year, about children, are as reliable as the results of a standardized test. Children scoring lowest on the test showed a very close correlation with my predictions.

More than ever, I realized that if books are made available, children can and will attempt to read them. Ruth Tooze emphasized in her book, Storytelling, that illustrations of a story should not be shared with the group until after the story has been told or read. This emphasis was made because she feels that the child should first have the opportunity to form mental images.

I learned that I should not be so unhappy about the children's mechanical reading as long as I keep helping them to read with expression.

I discovered that the fastest and ablest readers can be over-confident and not so thorough on a test as do some of the less capable readers.

Teacher L

I find I am not as rigid in regard to trying new or different approaches. For instance, I found that oral reading can be started with some children quite early in first grade.

I changed my concept as to how much phonics should be taught or emphasized. I taught vowel sounds about mid year. Before this I barely introduced them by the end of the year.

This was my first experience in writing individual stories which children dictated. This was very successful with a number of children.

I realize more strongly than ever that one technique will not work with all children. Not all of my pupils liked to dictate and then read their stories.

One change in my teaching is that this year I encouraged all children to read story books. They could take books home if they liked. This class read more than any of my previous classes.

I have a better grasp of what individual differences mean. I was quite surprised at the difference in the amount of time it took children to learn letter names.

I have a more positive attitude toward diagnosis. I find it can tie in diagnosis with almost any reading activity.

Teacher M

This year I taught letter names and sounds of consonants during the readiness period, which I never thought possible in past years.

I have found that through using individual experience stories that words become more meaningful for the children and therefore easier to learn and remember.

This year I placed a list of words on the board when the children wrote their stories. They could look up a word on the list and learn how to spell new words.

This year I used more of a variety of ways for teaching sight words. I borrowed and modified techniques we saw demonstrated.

I provided more practice and review of "service words" this year. I believe children learned more of these words as sight words than in previous years.

Teacher N (Responses cited in text, page)

III. Professional materials read during the In-Service Project.

> "From the start it was emphasized that filling out these weekly evaluations was not intended to be and should not be viewed as an activity which called for the expenditure of a large amount of teacher time. Teachers were encouraged to list items rather than describe in great detail. For example, materials read should simply be identified rather than set down in standard bibliography form." (From page of text, emphasis added.)

Teacher A

Reading Teacher (Jan. 1963, Nov. 1963, Jan. 1962, Dec. 1958, March 1964)
Elementary English (April 1957, January 1964)
Learning to Read Through Experience (Lee & Allen)
Teaching Children to Read (Lillian Gray) 3rd Edition.
Foundations for Reading (Betts)
"Individualized Reading" (NEA Journal, Nov. 1964)
"Individualized Reading VS Group Reading" (Dolch)
Phonics (Scott, Thompson)
Your Child Learns to Read (Artley)
Helping Children Read (Brogan and Fox)
Reading and The Language Arts (Supplementary Educational Monographs #93)
Reading Aids Through the Grades (David Russell & Etta Karp)
Teaching Young Children to Read (Cutts, Editor)

Teacher B

Foundations for Reading (Monroe & Rogers)
Learning to Read Through Experience (Lee and Allen)
"Teaching Beginners the Purpose of Reading," (Edward Lewis)
"We Need a Total Approach to Reading," (Botel)
"Why Tell Stories?" (Phyllis Ferner)
Helping Children Read (Brogan and Fox)
"A Teacher Teaches Better," NEA Journal, (Redifer)
Teaching Reading (Heilman)
"Reading Readiness in Kindergarten," (Kerfoot)
"How Can Parents Help Children Read"
"No Best Way to Teach Reading"
Phonics in Proper Perspective (Heilman)
"Individualized Reading," NEA Journal, (Carlton Moore)
Foundations for Reading (Monroe and Rogers)
"Individualized Reading VS Group Reading," (Dolch)
Materials for Reading (Helen Robinson, Editor)
The Place of Phonetic Reading in the Reading Problem (Carden)
"We Love to Get Mail," Instructor, (Miller)
"The Folly of Overplacement," NEA Journal
Individualizing Your Reading Program (Veatch)
"Teaching Reading Today," Instructor (Helen M. Robinson)
"Teaching Reading In Kindergarten" (Mary Austin)
"Developing Reading Readiness" (Helen Huus)

"Innovations in Beginning Reading" (Chall)
"Working With Groups" (Clymer)
"The Slow Learner" (Saine)
Evaluation of Reading (Robinson)
"All Time Favorites" Grade Teacher (Gans)
"Early Reading Is Risky Business" Grade Teacher (Hymes)

Teacher C (Material Cited P___)

Teacher D

The Reading Teacher (January 1965)
Elementary English (February 1963)
Teaching Reading (Gertrude Hildreth)
Phonics in Proper Perspective (Heilman)
Reading in the Elementary School (Spache)
N.E.A. Journal, "The Folly of Overplacement."
On Their Own in Reading (William S. Gray)
Article on Augmented Roman Alphabet
Article on Helps Available for Mentally Handicapped Children
Teacher (Sylvia Ashton Warner)
N.E.A. Journal, "Individualized Reading," March
Primary Activities (Publisher: Scott Foresman)
Psychology of Teaching Reading (Anderson & Dearborn)
Teaching Every Child to Read (Kathleen Hester)
Helping Children Read (Brogen and Fox)
Spice, Suggested Activities to Movitate the Teaching of Language Arts (Platts, et.al.)

Teacher E

Elementary School Journal, (April 1965)
The Packet (Spring 1963)
Elementary English, "An Evaluation of the Carden Reading Program," (Oct. 1964)
The Reading Teacher, "The Utility of Phonic Generalizations in the Primary Grades," (Clymer)
Improving Reading Instruction (Durrell)
Learning to Read Through Experience (Lee & Allen)
Phonics in Proper Perspective (Heilman)
Grade Teacher (Nov. 1964)
Independent Activities for Creative Learning (Darrow & Allen)
Teaching Reading (Heilman)
The Instructor (Feb. 1964)
Storytelling, (Tooze)
"Meaning, Comprehension and Understanding," (David Russell)
The Children We Teach (Nina Ridenour)
Language and Thinking (David Russell)
The Instructor (April 1964)
Articles on I.T.A. by William Sheldon and Roma Gans
Teaching Children to Read (Lillian Gray)
Materials for Reading (Robinson)
Improvement of Reading Through Classroom Experience (Figurel)

Teacher F

Learning to Read Through Experience (Lee & Allen)
Common Sense in Teaching Reading (Gans)
Reading Teacher (January 1963)
Elementary English (January 1963)
Improving Reading Instruction (Durrell)
On Their Own in Reading (Gray)
N.E.A. Journal (September 1964)
Teaching Reading (Hildreth)
N.E.A. Journal, "Individualized Reading"
N.Y. Times Articles
"Help to Brain Injured Children," (Christina Rick)
Independent Activities for Creative Learning (Darrow & Allen)
Article on Individualized Reading (Dolch)
Phonics in Proper Perspective (Heilman)
Spice (Platts, et. al.)
The Instructor, (March 1965)
Challenge and Experiment in Reading (J.A. Figurel, Editor)

Teacher G

On Your Own in Reading (William S. Gray)
Learning to Read Through Experience (Lee & Allen)
Improving Reading Instruction (Conference Proceedings,
The Pennsylvania State University)
Reading With Phonics (Hay & Wingo)
Independent Activities for Creative Learning (Darrow & Allen)
The Instructor (Nov. 1964)
Foundations for Reading (Rogers)
Teaching Reading (Heilman)
PSEA Journal (March 1964)
Storytelling (Tooze)
Your Child Learns to Read (Artley)
"Individualized Reading," (Dolch)
Teaching Young Children to Read (Cutts, Editor)
N.E.A. Journal (March 1962)
Grade Teacher (Nov. 1964)
Evaluation of Reading (Robinson)
Reading Instruction for Today's Children (Smith)
Developing Permanent Interest in Reading (Robinson)

Teacher H

"Research in Reading Readiness," (U.S. Office of Education Publication)
Elementary English (Oct. 1963, Dec. 1964, Feb. 1963)
Challenge and Experiment in Reading (Figurel, Editor)
Journal of Education, "Success in First Grade Reading"
Grade Teacher (Articles by Sheldon and Gans)
Spice (Platts, et. al.)
"Research Clues," N.E.A. Journal
"Testing is a Big Part of Teaching," (Leuchtenburg)
"For Reading Out Loud" (Dane)
"Individualized Reading VS Group Reading" (Dolch)
Toward Better Reading Instruction (Spache)
Common Sense in Teaching Reading (Gans)
"Reading--An Overview of Current Practices," Instructor (March 1965)
Grade Teacher, (Nov. 1965)
Young Child Learns to Read (Artley)
New Perspectives in Reading Instruction (Mazurkiewicz)

Teacher I

Learning to Read Through Experience (Lee and Allen)
Phonics in Proper Perspective (Heilman)
Improving Reading Instruction (Conference Proceedings,
The Pennsylvania State University)
The Reading Teacher (Dec. 1961)
Elementary English (January 1964)
The Packet (Spring 1963)
Elementary English (April, 1957)
Foundations for Reading (Monroe and Rogers)
Teaching Reading (Heilman)
Grade Teacher (Nov. 1964-Gans)
Improving Language Arts Instruction in the Elementary School,
(Shane, Mulry, Reddin)
Spinster, (Sylvia Ashton Warner)
N.E.A. Journal, "Individualized Reading" (Carlton Moore)
Reading Instruction, "Self-selection and the Individual Conference"
(Veatch)
"Individualized Reading VS Group Reading" Part I and Part II (Dolch)
Individualizing Your Reading Program (Veatch)
The Teaching of Reading (McKee)
The Instructor (March 1965)
Grade Teacher (March 1965)
Challenge and Experiment in Reading (J. Allen Figurel)
Oral Aspects of Reading (H.M. Robinson)
Teaching Young Children to Read (Cutts, Editor)

Teacher J

- Parents are Needed in a Good Reading Program (Nancy Larrick)
- Elementary English, "In Defense of Individualized Reading" (Veatch)
- The Reading Teacher, "When Two Vowels Go Walking" (Burrows & Lourie)
- On Their Own in Reading (William Gray)
- Educator's Guide to Personalized Reading Instruction (Walter Barbe)
- Grade Teacher, "There is no Best Way to Teach Children How to Read" (Gans)
- The Reading Teacher, "The Real Frontier in Reading Research, (Clymer)
- The Reading Teacher, "Context Clues in Primary Reading" (Sister Miriam, O.P.)
- I.R.A. Proceedings, "Self-selection and the Individual Conferences in Reading Instruction" (Veatch)
- Storytelling (Tooze)
- These Are Your Children (Jenkins, Schacter, Bauer)
- Elementary English, "The Dictionary in the First Grade," (Helbert)
- Common Sense in Teaching Reading (Gans)
- Beginning Language Arts Instruction (Shane, Reddin, and Gillespie)
- Elementary English, "An Evaluation of the Carden Reading Program," (Oct. 1964)
- Elementary English, "A Program for Immature Readers," (Oct. 1964)
- Diagnosing Reading Difficulties Through Classroom Procedure (Paul Burns)
- Let's Read (Cloomfield and Barnhart)
- Meaning, Comprehension and Understanding (David Russell)
- "Helping Beginners Become Readers" (Clearfield)
- The Reading Teacher, "The Utility of Phonic Generalizations in the Primary Grades (Clymer)
- Learning to Read Through Experience (Lee and Allen)

Teacher K (Material cited on p___)

Teacher L

- Learning to Read Through Experience (Lee & Allen)
- Elementary English (Oct. 1963)
- The Reading Teacher (Jan. 1962)
- The Teaching of Reading (McKee)
- N.E.A. Journal, "Individualized Reading"
- Teaching Reading (Heilman)
- Storytelling (Tooze)
- These Are Your Children (Jenkins)
- Phonics In Proper Perspective (Heilman)
- Common Sense in Teaching Reading (Gans)
- Teaching Every Child to Read (Hester)
- Challenge and Experiment in Reading (Figurel)
- Teaching Young Children to Read (Cutts)
- Foundations for Reading (Monroe & Rogers)
- Improving Reading Instruction (Conference Proceedings, The Pennsylvania State University
- Your Child Learns to Read (Artley)

Teacher M

Materials for Reading (Supplementary Educational Monographs,
  Chicago 1957)
Learning to Read Through Experience (Lee & Allen)
The Reading Teacher (April 1954, April 1959)
The Packet (Spring 1963)
Elementary English (Feb. 1961, Oct. 1964)
The Instructor (Sept., Oct., Nov., 1964)
Grade Teacher (Nov. 1964, Dec. 1964)
Independent Activities for Creative Learning (Darrow & Allen)
N.E.A. Journal, "Individualized Reading" (Veatch)
Improving Reading Instruction (Durrell)
Elementary English, "Individualized Reading VS Group Reading"
  (Dolch)
Readings on Reading Instruction (Harris)
New Perspectives in Reading Instruction (Mazurkiewicz)
Improving Reading Instruction (Conference Proceedings,
  The Pennsylvania State University)
Evaluation of Reading (H.M. Robinson, Editor)

Teacher N

The Teaching of Reading (McKee)
Improving Reading Instruction (Conference Proceedings
  The Pennsylvania State University)
Learning to Read Through Experience (Lee & Allen)
Teaching Reading (Heilman)
Independent Activities for Creative Learning (Darrow and Allen)
Language Arts Instruction with Children (Shane, Reddin, Gillespie)
"There is No Best Way to Teaching Children How To Read" (Gans)
Teaching Every Child to Read (Hester)
"Individualized Reading Vs Group Reading" (Dolch)
Storytelling (Tooze)
Teaching Young Children to Read (Cutts)
"Working With Groups" (Clymer)
"Innovations in Beginning Reading" (Chall)
Teaching Reading Today (Robinson)
"Developing Reading Readiness" (Huus)
"They Can Read, But They Won't" (Alice Keliher)
"Early Reading is Very Risky Business" (Hymes)
"Basal Readers Are Good Books - But" (Archer)
The Montessori Method
Reading In The Elementary School (Spache)

IV. Evaluation of teaching during the In-Service Reading Project.

Note: Under this heading many teachers simply described what they did and the materials they used the previous week. There were a total of 143 teacher responses, about 75 per cent of which were descriptive rather than evaluative. This type of response is omitted here. The following responses are illustrative of evaluative statements made by the teachers:

I have a feeling I am not systematic enough. I don't seem to get all of the things finished which I start.

It is hard to find the time to do all of the things I would like to do. I do some things that are very time consuming then I wonder if the time was well spent.

Had feelings of frustration many times.

I set goals and try to accomplish them, but I seem to lose time somewhere.

I feel I do not spend as much time as I should with individual pupils and their weaknesses.

I have caught myself being impatient - particularly with the slower group, so now I make an effort to be more patient and less demanding.

I have tried a bit of diagnosis on myself as well as the children. I am finding out I am not the teacher I hoped I would be. This hurts my ego some but I am not discouraged.

(Many teachers expressed frustration during the period when tests were administered and scored. Very few felt that the results achieved were worth the time and effort expended.)

I am more conscious of trying to meet the individual needs of pupils and moving at their pace.

My record keeping is poor. I forget to write down developments. I am too busy developing new things to record the old.

I feel I am dropping behind and am not challenging the better minds enough.

I feel I should put more emphasis on testing.

I feel I am becoming more successful in having each child ego-involved in learning tasks.

This year I used many more approaches to teaching.

I compared my new plans with those of previous years, and I think I see a new vitality and freshness in this year's plans.

This year I capitalized on the children's interest in and enthusiasm for Christmas instead of battling against it. The pre-Christmas period this year seemed to enhance learning, in previous years academic work suffered.

This year I organized and executed my readiness program more effectively than I ever did before.

I think I am observing each child more closely than in previous years.

I do more with diagnosis. I find that in some cases I assumed that children knew more than they really did, and others I underestimated.

I believe I am more effective in diagnosing children's reading. As a result of this I have been able to give individual help to several immature children.

I use more of a variety of approaches this year. I feel much more secure in teaching phonics as a result of discussion and demonstration.